FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

OCTOBER, 1957

Koppers' plant fire fighters aided by over 300 volunteers control threatening Kobuta plant fire—See page 1038

IN THIS ISSUE...

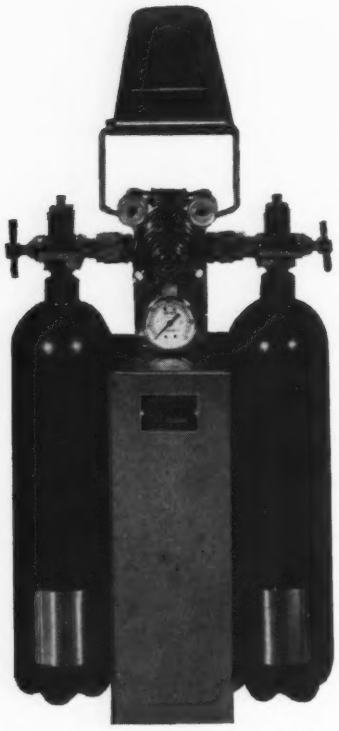
Fatal Processing Plant Blast Has Far-Reaching Repercussions

Record-Breaking Exhibits Spark IAFC Conference

Fire Fighters Go "Piggyback" in Submarine Base Mobilization

New!

EMERSON Resuscitator Ambulance Model



For easy carrying pick up the new Emerson by its convenient handle. For the transporting of a patient in a vehicle, support the resuscitator in its bracket, as shown.

The stainless steel compartment between the tanks keeps masks, mechanism, aspirator, and airways available and safe.

An Emerson Resuscitator is rugged and dependable. The mechanism is large enough to hold its pressure settings, and is exceptionally economical of oxygen.

It is simple to operate.

In breathing emergencies you can count on an Emerson to help you save lives.

J. H. EMERSON COMPANY
22 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS, U. S. A.

The STH-10 Siren is Superior!

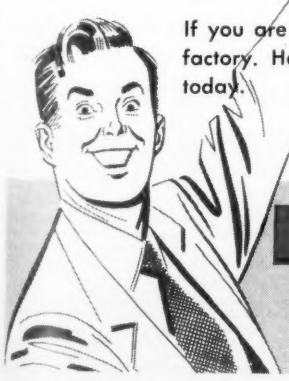
A few months ago we announced the new STH-10 Siren. Its performance is an outstanding improvement over its predecessor the STL-10, which in turn was a radical advance over conventional sirens.

Customer reaction was enthusiastic, it confirmed what our research and testing indicated. Our customers give outstanding praise to the performance of this siren in an area where other sirens have never given satisfactory coverage.

We do not claim the impossible for the STH-10; for maximum satisfaction the best possible location, mounting height, power supply and electric wiring are still necessary; but our experience to date shows the STH Siren will do a **better** job under any given set of conditions.

If you aren't satisfied with your present siren — order a FEDERAL STH-10!

If you are buying a siren for the first time why risk anything known to be less satisfactory. Have your specifications call for a FEDERAL STH-10 Siren. Write for literature today.



FEDERAL SIGN and SIGNAL Corporation

8702 S. State St., Chicago 19, Ill.

FIRE ENGINEERING

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With F. E.'s Correspondents

Actually his name is William Paul Babcock. But to his buddies in the fire service he has always been "Babby."

FIRE ENGINEERING has known him for 'nigh on to 50 years,—much of that time as a "contributor," and some of the time—from 1936 to 1940 to be exact—as the author of a regular column feature headed "The Cover."

Babby was born in Nyack in 1883. He can't remember when he didn't "follow the engines." It was only natural that he should gravitate to the fire service, after several years hitch as inspector for a fire insurance company.

Early in his career Babby developed a yen for salvage and fire prevention, to which he dedicated his every effort—without hope of reward. We understand he won his captaincy as a Nyack volunteer. He ultimately became inspector-in-charge, fire prevention department of the Village of Nyack, which post he held for years.

Babby now living in Bayville, N J., is currently engaged in selling fire protection equipment. On the side, he owns a surgical supply business. In between these jobs he finds time to scribble items for FIRE ENGINEERING.

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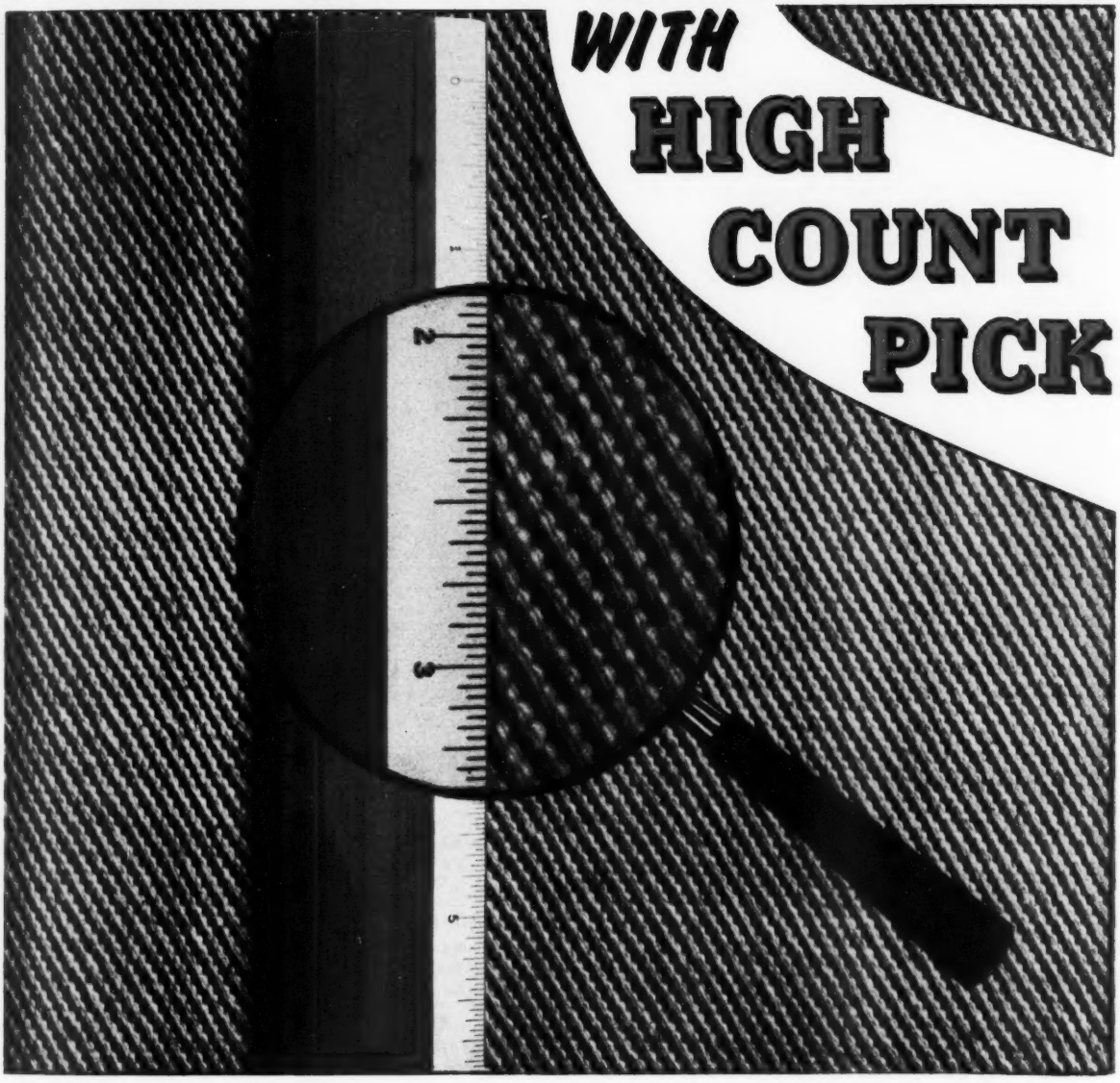
FABRILON

WITH HIGH COUNT PICK



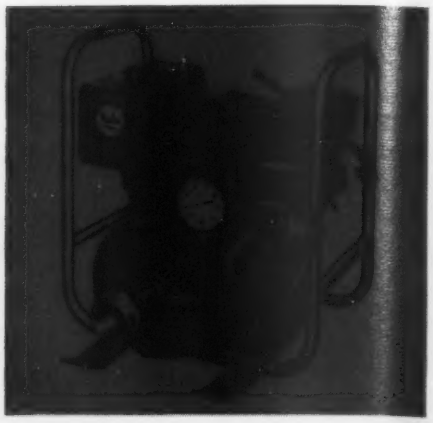
"*Pick*" is the number per inch of filler strands, or those which go *around* the hose. FABRILON has the remarkably high pick count of 12 to 14 per inch. In FABRILON, high pick count means *closely woven twill jackets* which *resist abrasion and snagging* and slide over obstacles with *minimum surface friction.* It also means *smooth texture, ease of handling, high burst* and resistance to *pressure shock* or *water hammer.*

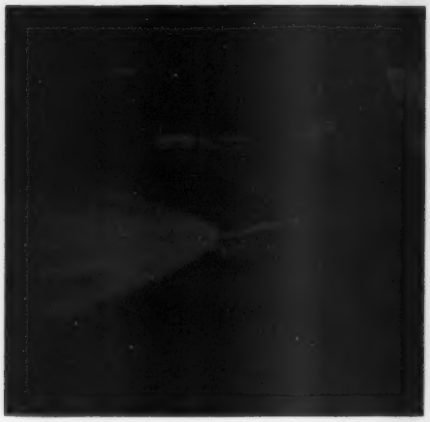
FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

IN CANADA *Pierre Thibault* CANADA, LTD., LTEE., PIERREVILLE, QUEBEC





Dependable Fire Fighting with MARLOW PUMPS

With a supply of surface water, a stream or pond, this portable pump becomes an efficient and light-weight fire fighter. Powered by a dependable four-cycle gasoline engine, it primes itself and starts pumping only 15 to 30 seconds after starting. Highly portable, the Marlow Fire Pump can be placed in a car trunk or jeep and dispatched quickly in an emergency. Because it is easily carried, the pump can be moved to remote areas that a pumper can't reach. On location, it is equally useful for either fire fighting or booster service.

Marlow Fire Pumps provide dependable protection for municipalities, industrial plants, and farms. It is indispensable to Fire Departments. This pump was engineered specifically for the job and has many outstanding features . . .

Exhaust primer — primes pump in 15 to 30 seconds, easily accessible to pump operator.

Lightweight — ribbed aluminum construction withstands high pressures, making readily portable unit. Weighs only 160 pounds with gas and oil, ready to operate.

Compact design—easily placed in small compartments or spaces on any pumper as well as in car trunks, jeeps, or pickups.

Welded-steel runner-type base — makes a rigid mount that can be easily lifted or skidded.

Combination vacuum and pressure gauge — when priming, shows operator whether or not there are leaks in suction hose. When pumping, allows operator to adjust pressure to individual operating conditions.

Dependable four-cycle engine — assures easy quick starting, unattended operation.

Shielded spark plug connection — prevents ignition failure from wet weather or spray.

Protective handles — Wrap around engine and pump and protect vulnerable parts. Handles are extra strong and are placed for convenient carrying.

Remote throttle — mounted on top of engine for easy operation.

Mechanical shaft seal — long-lived, rugged and requires no adjustment.

Automatic check valve — seals off discharge while priming, swings out of way when pumping starts, no hand valve to manipulate.

Fog or foam operation — over 100 pounds pressure available for low pressure fog or foam operation.

For details, literature, or application data, see your Marlow dealer today or write direct for Bulletin F-04.

Marlow PUMPS

6-227

DIVISION OF

BELL & GOSSETT CO.

Midland Park, N. J.

Morton Grove, Illinois **Longview, Texas**

B.F.Goodrich report:

That tight coil of hose springs into action faster

THE lightness and flexibility of B. F. Goodrich hose makes it easier to coil after a fire, easier to rack back at the station. Even more important, this easier-handling hose saves vital minutes when laying lines at a fire.

B.F.Goodrich Fire King is actually 22% lighter and much more flexible than ordinary hose. In Fire King, the "filler cords" which go around the hose and carry the load under pressure, are made with Dacron chemically-produced fiber. These cords are thinner yet stronger than cords used for reinforcement in ordinary hose.

Chief Dan Donovan (at left) of the Carmichael Fire District, Sacramento County, Calif., chose Fire King because it has the strength to take top pressures. This hose is tested at 600 pounds pressure, can stand up to twice as much pressure before bursting.

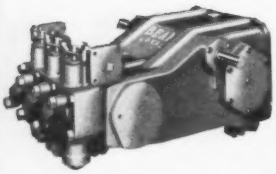
For areas where excess moisture is a problem, B.F.Goodrich has developed the exclusive Superseal protection for hose that makes it 10 times more resistant to mildew attack and rotting. Most treatments just coat the surface of the hose, but Superseal penetrates every cord of the inner and outer jacket, preparing the hose for all kinds of weather. Yet this protection costs no more than ordinary hose treatments.

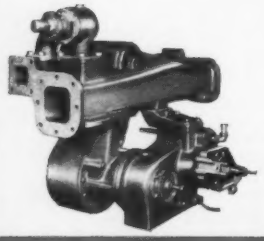
When you want hose that's light, flexible, and will last longer than any other hose sold, get B.F.Goodrich hose with Superseal protection. Your B.F. Goodrich fire hose distributor can tell you more about it, or write *B.F.Goodrich Industrial Products Co., Dept. M-150, Akron 18, Ohio.*

B.F.Goodrich

INDUSTRIAL PRODUCTS

greater versatility





1 *HPV — BOTH HIGH-PRESSURE FOG AND VOLUME PUMPS — Operated separately or simultaneously, these two John Bean pumps are the heart of the HPV's dual fire-fighting systems. One is the original John Bean high-pressure pump, famous the world over for its rugged construction and dependable performance. For true high-pressure fog fire-fighting, the pump operates at 850 psi delivering 60 GPM through two hose lines. The other is John Bean's Class A centrifugal volume pump (N.B.F.U. tested), available in capacities of 500, 600, or 750 GPM.

2 IN-MOTION PUMPING — John Bean's in-motion pumping makes the HPV doubly effective in fighting brush, grass, and forest fires. High-pressure pump has its own power take-off coupled to the engine so that fog lines can be operated while truck is in motion. Control for engaging pump is located conveniently inside cab.

instant action always

3 DUAL BATTERY SYSTEM — Instant starting is always assured by John Bean's dual battery system, which is standard equipment on all HPV Firefighters.

4 PUMP PRIMING — No time is lost in getting the John Bean volume pump into action. Gear shifting from "road" to "primer" has been eliminated. Primer control automatically opens and closes pump valve. The priming pump is of the positive displacement type and is used for *priming only*.

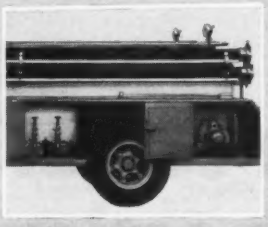
21 REASONS WHY

operating convenience

9 CENTRALIZED CONTROL PANEL — All gauges, valves, and controls are centralized on a single control panel for convenient operation. Panel is illuminated for quick, easy reading at night.

10 POWER REWIND HOSE REELS — For faster, easier hose pick-ups, both 200-foot high-pressure hose reels are equipped with powered rewind mechanisms. Hoses run smoothly over roller guides and are fed evenly onto reels.

11 AMPLE STORAGE SPACE — Four large-size, fully lighted compartments are built in to provide a total of more than 45 cu. ft. of storage space. One is tailored for slide-mounted generator equipment; another for portable water pump. Additional compartments offer ample storage for oxygen masks, nozzles, adapters, first aid, and other accessories. A small tool compartment is located conveniently above the rear platform.



12 INSIDE PUMP SHIFT — You save critical time and steps when arriving at a fire because John Bean's pump shift is located conveniently inside the cab.

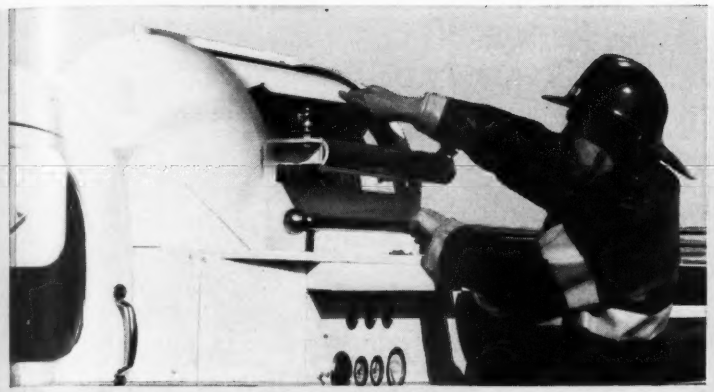
personnel safety

18 FULL-LENGTH GRAB RAILS — Chrome rails at convenient height extend full length of hose body and across rear, permitting firemen to don equipment safely while riding.

19 NON-SKID RUNNING BOARDS — Full-length side running boards are manufactured from approved non-skid treadplate, are securely mounted to the chassis frame.

20 EXTRA-WIDE REAR PLATFORM — Safety and comfort for riding firemen is assured by John Bean's extra-wide rear platform, constructed of approved non-skid treadplate.

21 FACTORY TRAINING by experienced fire fighters at John Bean is a part of the regular service that goes with every John Bean truck. Complete course teaches your personnel how equipment is best used and properly maintained.



5 WINTERIZED REEL COMPARTMENTS — To assure dependability in freezing weather, engine heat is channelled into enclosed reel compartments where it is retained by sliding metal covers. Engine heat is also used to warm pumps, valves, gauges, and controls.

rugged construction

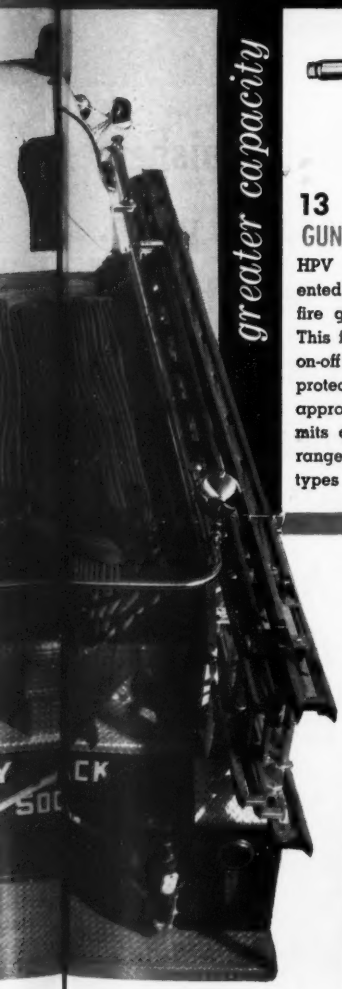
6 BALL-TYPE DISCHARGE GATES — Rugged, quick-acting ball-type gates will not leak under pressure or suction, turn easily at all operating pressures.

7 HEAVY, RUST-PROOFED TANK — 500-gallon, 10-gauge steel water tank is fully treated against rust to assure long life. Large, removable tank covers permit easy cleaning and inspection.

8 HIGH-STRENGTH PANELLING — All body panelling and compartments are made from special 12-gauge, stretcher level, body steel, completely reinforced with U-formed top for added strength and rigidity.

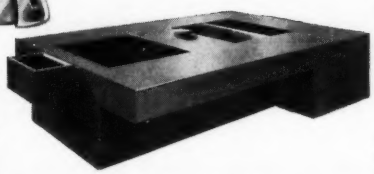
John BEAN HPV* FIREFIGHTERS

meet your fire-fighting needs like no other equipment can!



greater capacity

13 THREE HIGH-PRESSURE GUNS — Furnished with each HPV Firefighter are three patented John Bean high-pressure fire guns (third gun is spare). This famous gun features instant on-off trigger action with face-protecting spray for close fire approach. Rotating barrel permits quick selection of complete range of fog patterns for all types of fire.



14 500-GALLON TANK — Big 500-gallon tank supplies water for John Bean high-pressure fog lines. Fire-extinguishing value of water discharged as high-pressure fog is increased by a ten-to-one ratio — makes the 500 gallons go ten times further. Six-compartment baffling prevents undesirable water surge.

15 SPACIOUS HOSE BED — Smooth, level hose bed is properly ventilated . . . provides ample space for 1200 ft. of 2½-inch and 400 ft. of 1½-inch double-jacketed fire hose.

16 400 FT. OF HIGH-PRESSURE HOSE — Standard equipment with each HPV Firefighter includes two 200-foot reels of special high-pressure (3500 psi discharge) hose.

17 40 FT. OF SUCTION HOSE — Other standard equipment includes two 10-foot lengths of 2½-inch and two 10-foot lengths of 4½-inch hard suction hose, complete with hydrant adapters and suction screens.

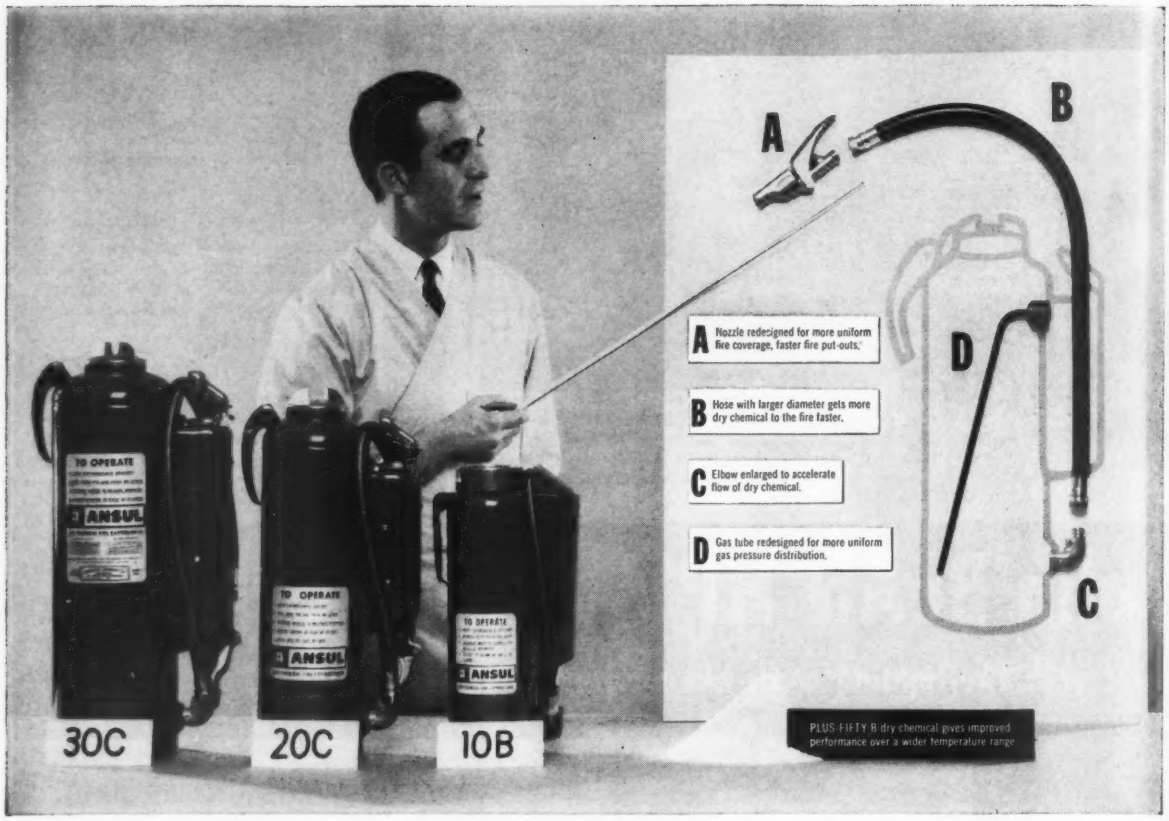
For complete details on John Bean Firefighters, write today for catalog.

fmc®

JOHN BEAN

Dept. 126, Lansing 4, Michigan
P.O. Box 145, San Jose 3, California

A Division of Food Machinery and Chemical Corp


A
B
C
D
A Nozzle redesigned for more uniform fire coverage, faster fire put-outs.
B Hose with larger diameter gets more dry chemical to the fire faster.
C Elbow enlarged to accelerate flow of dry chemical.
D Gas tube redesigned for more uniform gas pressure distribution.
PLUS FIFTY B dry chemical gives improved performance over a wider temperature range
30C
20C
10B
TO OPERATE
ANSUL

Important design improvements in these Ansul Extinguishers give you more fire fighting power at no increase in price. Three years of research and more than 2000 fire tests turned up some significant new information on dry chemical extinguishment. Ansul engineers were able to design these findings into three new extinguisher models, the 10B, 20C and 30C. Result, greatly increased fire fighting power. All Ansul equipment is backed by a five-year warranty. This is the best way we know to say Ansul fire extinguishers are the finest of their kind made anywhere.

ANSUL

The Ansul Chemical Co., Marinette, Wisconsin

Yes! American Fire Apparatus has it . . .

An approved front-pump installation for any standard '57 chassis--V8 or 6 engine

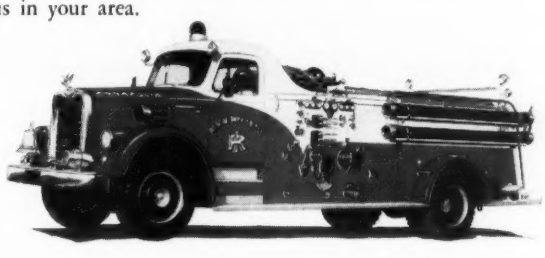
Go ahead — select any current standard model chassis, V8 or six, and American Fire can equip it with a front-mounted pump. Low mounted cooling fans pose no problems to American engineers . . . as this thoroughly tested, approved 1957 truck proves.

And when you specify a famous Barton-American Pump — either Front-mounted or Multi-Stage Midship Models — you get dependability and top performance every time.

Covered hose reels, an extra feature on this truck, are another example of engineering excellence. Covers retain heat channelled from the engine so hoses and fog guns are "ready for action" even in freezing temperatures. When the weather warms up, covers can be easily removed.

So why wait? Choose your 1957 truck chassis now. Then let American provide you with the style pump and the field-tested features you've always wanted. You'll soon command the most effective fire-fighting apparatus in your area.

Contact your nearest American Representative for full details!



A recent 1000 GPM midship pumper for Annapolis, Md.

Your choice of commercial truck chassis can be equipped with front-mounted or midship pump.

American

AMERICAN FIRE APPARATUS CO.

"Always Pioneering with Better Engineering"

Main Office: Main Street Rd., Battle Creek, Mich. Plants at: BATTLE CREEK, MICH., MARSHALLTOWN, IA., STRATFORD, ONT.

DURA-FOG

- Stream can be selected by sight or touch
- Clicks into straight stream or desired fog pattern
- Floating gland type shut off
- Shock absorbent shut-off mechanism
- No kick back
- Rubber bumper
- Sturdy handle

PLATE 261

FOG CHIEF

- Compact
- Advantage of shut off, straight stream, and a variety of fog patterns
- Operates easily under high pressure
- No kick back
- Rubber bumper

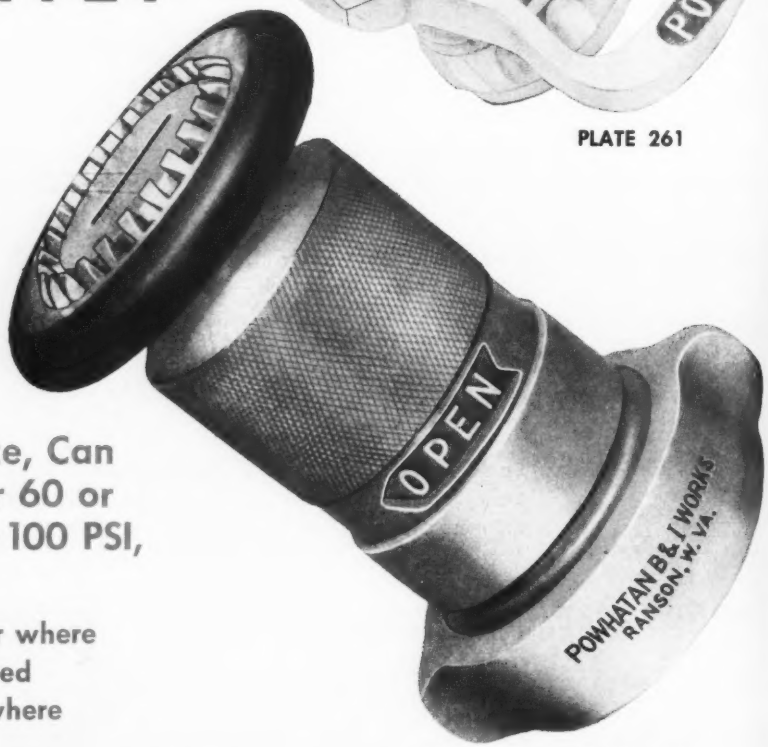


PLATE 262

Both Nolzzles, 1½" Size, Can Be Suppied with Either 60 or 100 GPM Discharge at 100 PSI, 30° Fog Pattern.

60 GPM for rural areas or where water supply is limited
100 GPM for cities or where water is plentiful

Our **65** th Year

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

MILDEW CONQUERED!

IN FIRE HOSE BY

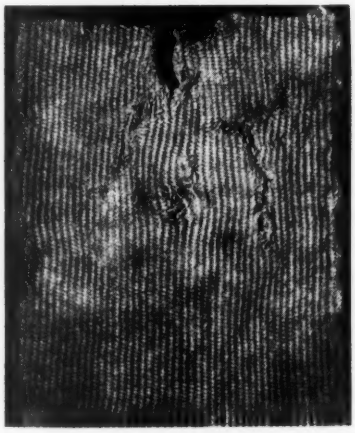
with NEW AMERICAN-LAFRANCE and GOODYEAR

SUPER ALL-WEATHER TREATMENT

A startling new development has been announced by American LaFrance and Goodyear which practically ends worries of mildew, the dread enemy of fire hose. Mildew has weakened fire hose fabric and shortened its life for years.

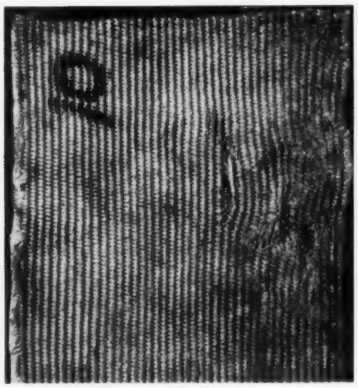
This revolutionary new treatment extends through every cord completely penetrating each fire hose jacket. It performs the feat of perfectly combining an excellent water repellent and a truly effective mildew inhibitor in the same operation.

To prove the outstanding quality of this treatment, actual fire hose was subjected to severe tests by an independent laboratory with these results:



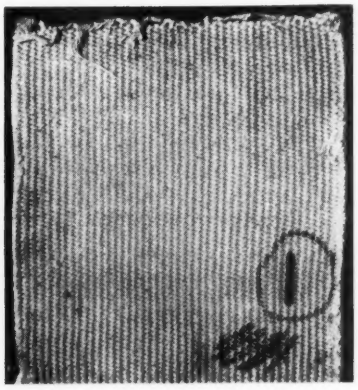
Above photo illustrates the destructive action of mildew growth on an untreated hose jacket which has been subjected to a standard accelerated soil burial test conducted by an independent laboratory.

NOTE: *The tensile strength of the cotton has been completely destroyed through the action of attack by mildew.*



Above photo illustrates the destructive action of mildew on a hose jacket which has been treated for resistance to mildew growth with a generally acceptable type of anti-mildew treatment and subjected to a standard accelerated soil burial test conducted by an independent laboratory.

NOTE: *The tensile strength of the cotton has in part been completely destroyed and in other parts seriously impaired by the action of mildew.*



Above photo illustrates the lack of destructive action of mildew on a hose jacket which has been treated with the new Goodyear Super All-Weather anti-mildew treatment. It has been subjected to a standard accelerated soil burial test conducted by an independent laboratory.

NOTE: *The cotton fibers have not been attacked by mildew and the original tensile strength of the fibers is retained.*

AMERICAN LAFRANCE CORPORATION

ELMIRA, NEW YORK, U.S.A.

IN CANADA, LAFRANCE FIRE ENGINE & FOAMITE LTD., TORONTO

SHAWMUT, Inc. Textile Manufacturers, BROCKTON, MASS.

Stoughton, Mass., Plant, Shawmut, Inc.

protects its New England plants *Automatically* . . . gets better FIRE and BURGLARY protection

SAVES $10,000 A YEAR

Your system again proved its effectiveness when a burglar was apprehended recently at our Stoughton plant. This has happened on several occasions and is one of the reasons we are so pleased with your automatic protection. We believe it is much better than a night watchman making rounds once an hour and the cost is much less. We estimate our savings at $10,000 a year.

J. L. Wyner
Vice President

Shawmut, Inc., manufacturers of worsted jersey cloth and the nationally advertised McKem-Vanta line of children's wear, are among the thousands of industrial concerns that are getting greater security *at lower cost* by protecting their properties *automatically*.

At their main plant in Brockton and at the Stoughton plant illustrated above, Shawmut uses a combination of ADT Central Station Burglar Alarm, Sprinkler Supervisory and Waterflow Alarm, and Heating Supervisory Services. Mr. Wyner's statement attests the exceptional value of these and other ADT Automatic Protection Services in providing better protection for property, profits and employees' jobs than other methods, and *at lower cost*.

May we show you what ADT can do for you?

Whether your buildings are old or new, sprinklered or unsprinklered, there is an appropriate ADT Automatic Protection Service to guard against fire, burglary, intrusion, heating system failure, and other hazards. An ADT specialist will show you how combinations of these services can protect your property. Call our local sales office if we are listed in your phone book; or write to our Executive Office.

ADT

Controlled Companies of
AMERICAN DISTRICT TELEGRAPH COMPANY
A NATIONWIDE ORGANIZATION
Executive Office: 155 Sixth Avenue • New York 13, N. Y.

with the widest range of exclusive components...

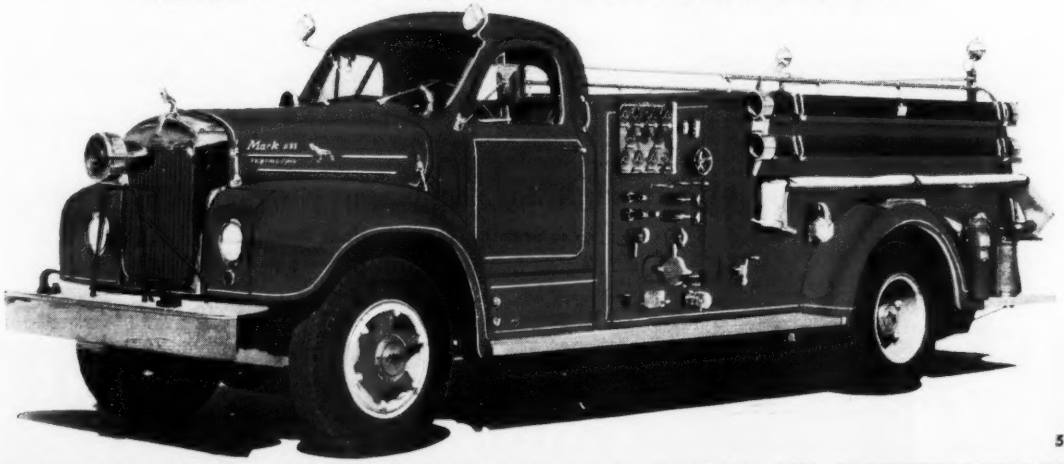
There's a Mack for every apparatus need

Mack—and you. That's the team that can design and build the finest type of fire apparatus for your needs, whether you're buying a unit or a fleet.

Prefer conventional design... or cab-forward models? Mack offers the best in both. Operate in hilly country... or over flat terrain? Mack has the right rear axle ratios for *any* situation. Operate through congested traffic? Torque converter drive and air brakes are essential and Mack has 'em. Need room for special equipment? Mack basic chassis and body design provides plenty of space for built-in equipment lockers and holders. *Whatever* your requirements, Mack meets them best.

More than that, Mack performance and dependability are in a class by themselves. Fast off the mark... a real pleasure to handle... equal to the toughest demands... Mack fire apparatus stays in peak condition year after year with only routine servicing. Contact your Mack representative for full details. Mack Fire Apparatus, Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

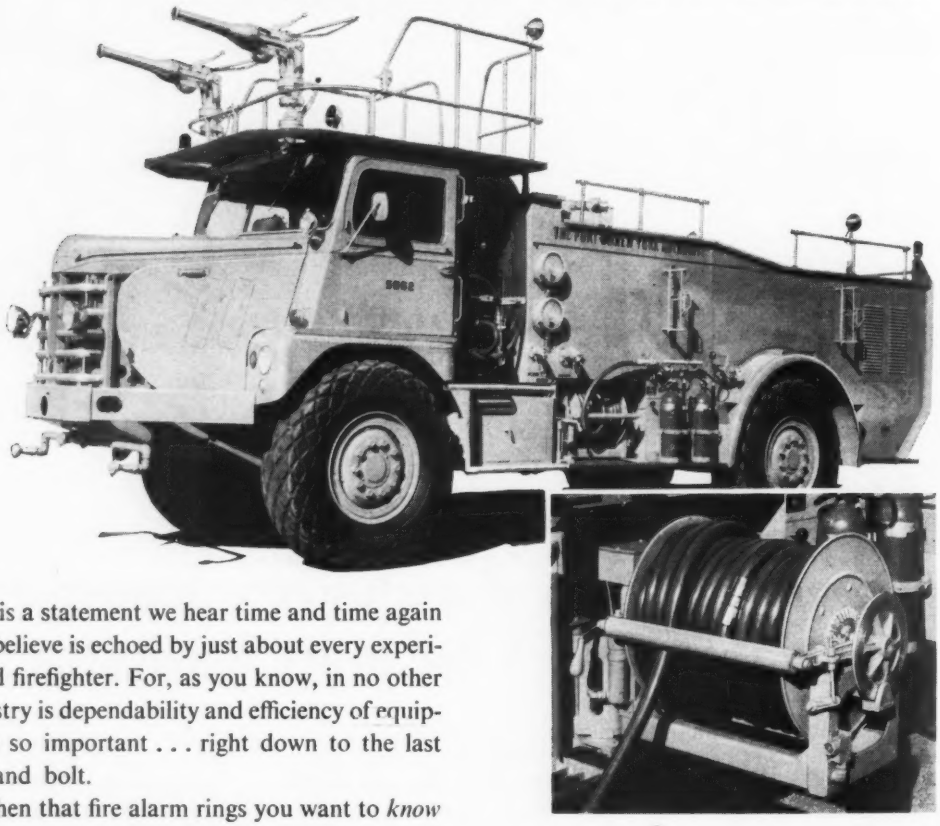
MACK *first name for* FIRE APPARATUS



5502

COMPLETE LINE OF PUMPERS—500 to 1250 GPM · SQUAD AND HOSE WAGONS · AERIALS 65' to 100' · COMBINATION LADDER TRUCKS

"...On Front Line Fire Equipment— only the best should be used"



This is a statement we hear time and time again and believe is echoed by just about every experienced firefighter. For, as you know, in no other industry is dependability and efficiency of equipment so important . . . right down to the last nut and bolt.

When that fire alarm rings you want to *know* your engines—and every last piece of equipment —are ready to go. And once you arrive at the scene of the fire you want to *know* hose can be unwound quickly and will be ready for immediate use—with water right at the nozzle.

That's why HANNAY Hose Reels are "the standard quality for fire fighting equipment." Because ever since the first HANNAY Fire Hose Reel was designed and built more than 20 years ago, making the best and most dependable hose reel has been our only business.

HANNAY® Fire Hose Reel Features

- **WATER RIGHT AT THE NOZZLE, ready to use.**
- **FULL-FLO HUB ASSEMBLY for free flow of water. OP 600 psi—or higher on request.**
- **TRU-CIRCLE DRUM preserves hose. No flat spots to bend hose.**
- **HEAVY-DUTY DRUM CONSTRUCTION with reinforcing assures rigidity and strength.**
- **ROLLED DISC EDGES have no sharp edges to cut hose.**
- **POSITIVE SPROCKET & CHAIN DRIVE always properly aligned and engaged.**
- **TROUBLE-FREE SWIVEL JOINT for dependable service in choice of 90° elbow or straight.**
- **HORIZONTAL OR VERTICAL CRANK REWIND. Hand crank standard on all reels.**
- **HEAVY DUTY MOTOR with push-button control has power for toughest jobs.**

For Every Type of Fire Fighting Equipment

. . . Greatest Name In Hose Reels

HANNAY®

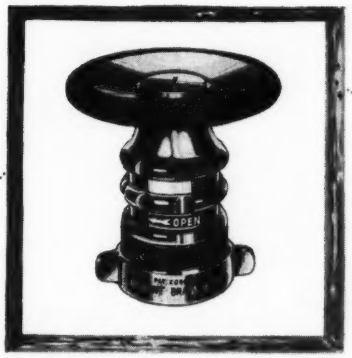
© 1957 C.B.H.&S., INC.

CLIFFORD B. HANNAY & SON, INC.

Westerlo, New York

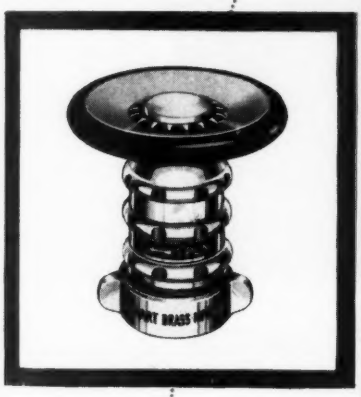
Picture Proof of Progress

ELKHART'S MYSTERY FOG NOZZLE



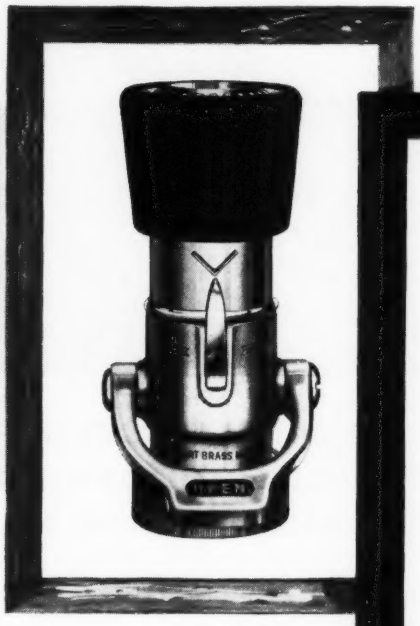
1936

The first of the famous Mystery Fog Nozzles. First "all-purpose" nozzle that delivered straight stream, fog cone and water curtain.



1943

This is the year we "put teeth" in the Mystery Nozzle. These teeth "chew" the stream to deflect water inward to fill up the fog cone. Teeth do not touch or affect the straight stream.



1952

This was the year we first announced the new Select-O-Stream Mystery Nozzle. Raised Stream indicators allow stream selection by touch or "feel". A popular item in today's production in 1″—1½″—2½″ sizes.

1957

Newest in a famous line. The "F" Series S-O-S Nozzle gives straight stream and all degrees of fog *plus* FOG FOAM—with no extra nozzle attachments. Available from 1″ through all sizes including 2500 gallon Jumbo King Mystery Nozzle.

ELKHART BRASS MFG. CO., INC.

ELKHART, INDIANA

More Than Half A Century of Fire Fighting Progress

SAFA ALARM SYSTEM PERMITS 90% SPACE REDUCTION FOR ALEXANDRIA, VIRGINIA, FIRE DEPARTMENT

Chief Bernard J. Padgett Selects SAFA Type "A" System to Receive, Transmit and Record Fire Alarms

Not only did Chief Padgett achieve a 90% saving in space with his new SAFA Type "A" Fire Alarm System, but he got simple, arm's-reach operation of an installation that serves a potential 430 fire boxes and 16 fire stations. In addition to these advantages, here are other benefits that this SAFA system provides:

No storage batteries are needed—a generator automatically supplies power during primary power failures.

A complete line of testing facilities is also provided on the door of the Protected Entrance Cabinet. The test panel will show voltage across each circuit, leakage between either side of any circuit to ground, and leakage between circuits.

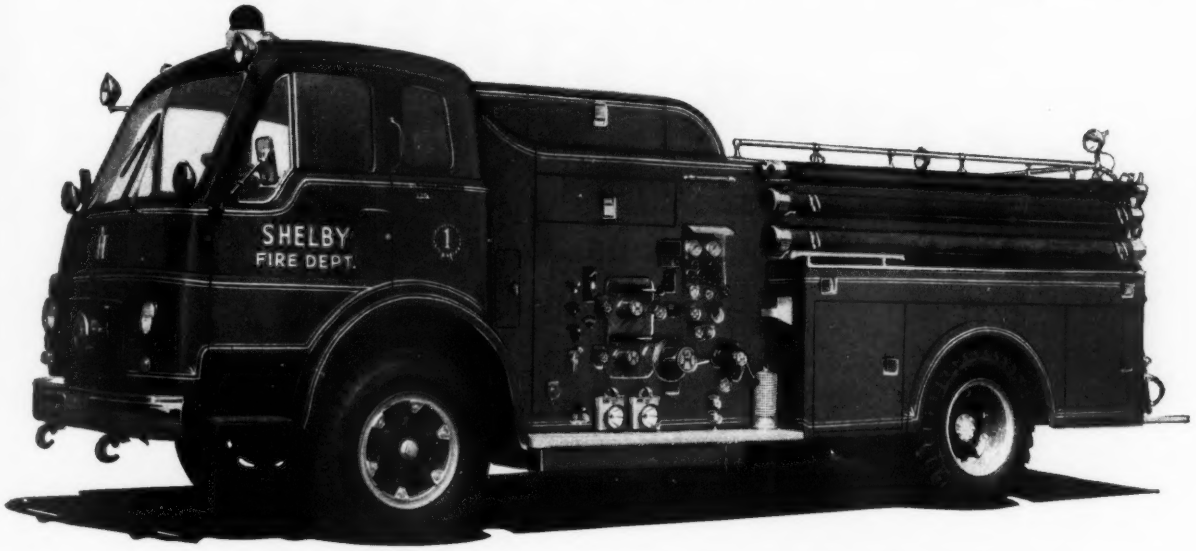
Makes Any Municipality Safer. Alexandria is typical of the more than 100 municipalities which have specified SAFA Alarm Systems or related equipment installations for dependable duty around the clock. SAFA Alarm Systems are products of The Fyr-Fyter Company, producers of dependable fire protection for more than forty years.

Custom Engineering and Design. Experienced SAFA engineers provide complete assistance in custom-planning and supervision of single units or complete municipal installations. Call your SAFA specialist direct or write: SAFA Alarm Division, Inc., The Fyr-Fyter Company, Newark 1, N. J., for full information.

SAFA ALARM DIVISION *The Fyr-Fyter Co.*
NEWARK, NEW JERSEY

BRANCHES: ATLANTA • BOSTON • CHICAGO • DALLAS • LOS ANGELES • NEW YORK • SAN FRANCISCO

Custom Performance on a Commercial Chassis is yours with a HOWE PUMPER!

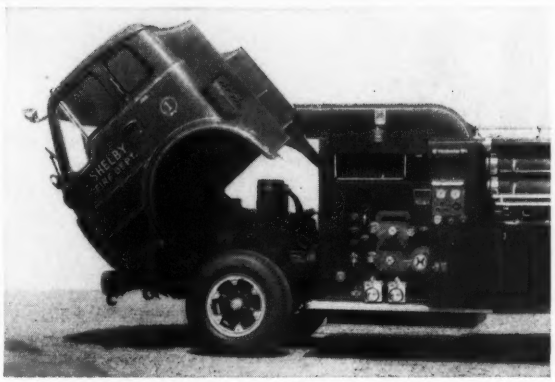


YOU WON'T BE SATISFIED with less than top performance . . . and anticipate that your requirements call for a custom-built job? Then do like the fast-growing suburban community of Shelby, Wisconsin! Invest in a HOWE pumper built on commercial chassis.

The impressive unit shown is a powerful fire fighter meeting the demand of any department for easy handling, ease of maintenance and TOP PERFORMANCE. The tilt forward, cab-over-engine chassis by International is designed with short wheelbase for short turning radius, easy steering, excellent visibility. There's quick, convenient access to the engine for servicing. Pumpers with the same characteristics are also available on Ford chassis.

Because of engine size, there is large pumping capacity. Choose a 6 cylinder RD501 developing 212 HP or a V8 with either 225 or 257 HP, and you have sufficient horsepower to produce 1,000 or 1,250 GPM. Shelby has more than doubled its efficiency by purchasing twin pumpers! The one shown has 500 gal. booster tank. The second, identical in body and chassis, has a 1,250 gallon booster tank and a folding 1,000 gallon tank, for a total of 2,750 gallons carried on the two trucks. Each has portable pump.

Together they make Shelby one of the best equipped small departments in existence anywhere. HOWE provides the type equipment every department needs. Before you buy, call HOWE.



Cab tilted forward shows accessibility of engine. Door to the booster reel compartment is raised to revea electrically operated, completely enclosed, heated hose reels, dropped over 750 GPM Waterous Electro-Matic, completely push-button operated, pump. Above hose reels is another compartment for boots and clothing. Spacious compartments flush with outside dual rear wheels hold extra equipment. Directly above is a long compartment for apparatus fittings. On opposite side is identical compartment and also one for stretchers. Two large rear compartments house generator and light plant. Streamlining of famous HOWE pumper body is retained in its integration with cab and chassis.

HOWE

HOWE

MEMBER FAM
(Fire Apparatus Manufacturers Association)

FIRE APPARATUS COMPANY

"dependable fire apparatus since 1872"

Dept. FE 107, 1400 West 22nd Street, Anderson, Indiana, U.S.A.

for lighter weight and GREATER STRENGTH

SPECIFY

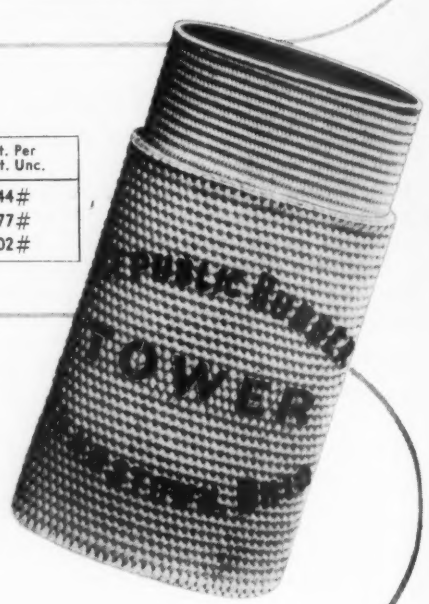
REPUBLIC'S DACRON FILLER
MUNICIPAL FIRE HOSE

Champion 600# Test Pressure

Size	O.D.	Test Pressure	Wt. Per C Ft. Unc.
1½"	2 "	600#	45#
2½"	3 1/16"	600#	79#
3 "	3⅝"	600#	107#

Tower 400# Test Pressure

Size	O.D.	Test Pressure	Wt. Per C Ft. Unc.
1½"	1 31/32"	400#	44#
2½"	3 3/16"	400#	77#
3 "	3 19/32"	400#	102#



In addition to these Dacron Filler types, Republic makes two Cotton Filler, Double Jacket types: K-122 Chariot and K-127 Target, both for 400# Test Pressure.

Republic Municipal Fire Hose is Provar Processed as standard construction for mildew prevention and is flat-cured, permitting easy handling and storage of more footage. Send us your order or request for quotation.

"Quality Hose Builders for Over 50 Years"

REPUBLIC RUBBER DIVISION

LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO

INDUSTRIAL RUBBER PRODUCTS

There is A Difference!

CHECK ✓

Weight distribution

Pump-engine balance

CHECK ✓

Paint finish

Sheet metal construction

MAXIM EQUIPMENTS

for Commercial Chassis

MAXIM MOTOR COMPANY

Middleboro, Mass.

"THERE'S NO SUBSTITUTE FOR THE BEST MEN

...OR THE FINEST RADIO EQUIPMENT

Maximum fire protection demands maximum effectiveness. Your firemen—dependable, able, and ready at a moment's notice—must have equipment of the same qualifications. Every one of the parts that go into your 2-way radio must be the finest available . . . must be guaranteed for long life . . . must keep the radio working in all emergencies. No wonder 3 out of 4 of the nation's radio-equipped fire departments depend upon Motorola 2-way radio and HANDIE-TALKIE® radiophone.

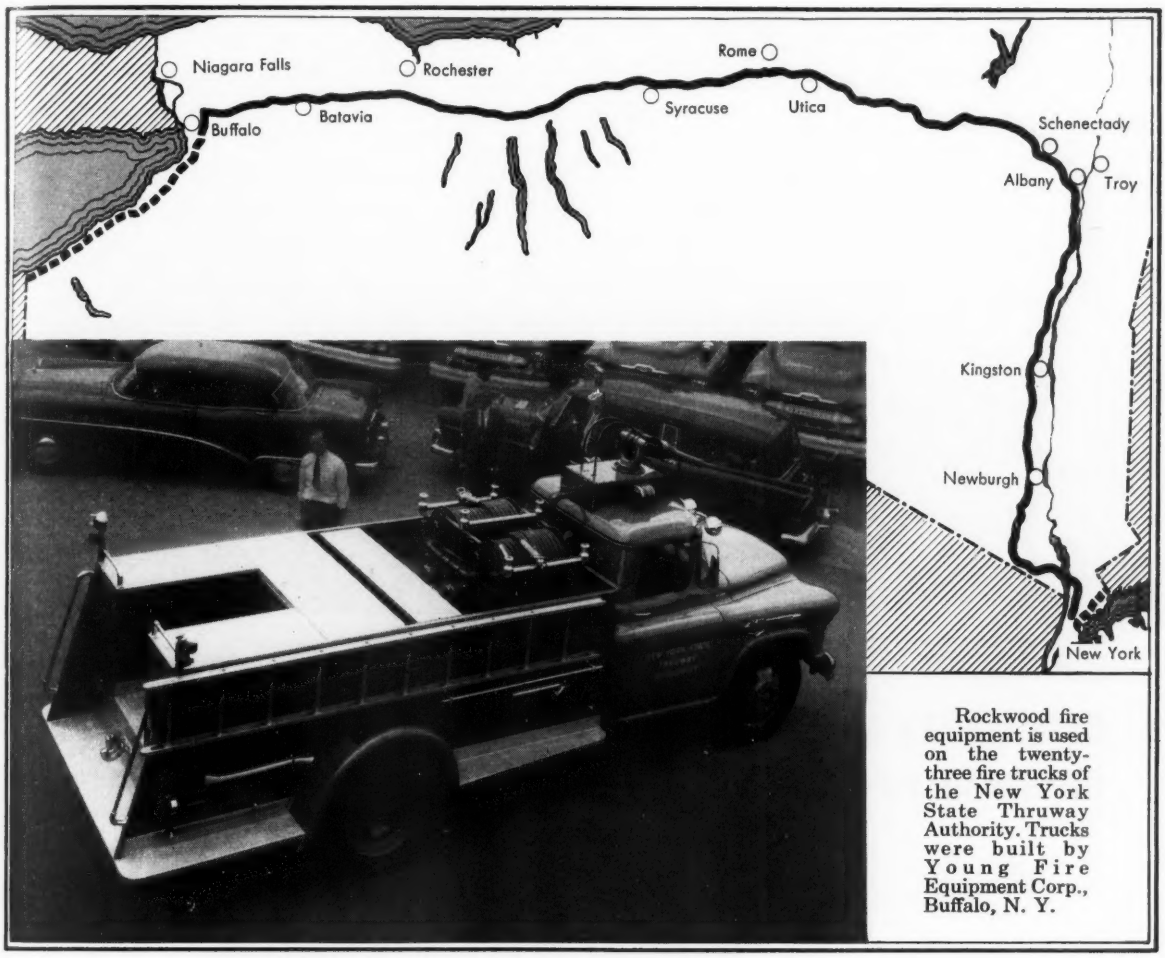
In New York, Miami, Los Angeles, Chicago . . . and practically every other leading city and countless large and small communities . . . rugged Motorola radio is proving that it is engineered to give the most dependable 2-way communications.

In your city or town, Motorola is ready to help you multiply your department's efficiency and protection. Learn how these benefits can be applied to your own operation.

® Handie-Talkie is a Registered Trademark of Motorola, Inc.

MOTOROLA 2-WAY FIRE RADIO

MOTOROLA COMMUNICATIONS & ELECTRONICS, INC. • A Subsidiary of Motorola, Inc. • 4501 Augusta Blvd. • Chicago 51, Illinois



Rockwood fire equipment is used on the twenty-three fire trucks of the New York State Thruway Authority. Trucks were built by Young Fire Equipment Corp., Buffalo, N. Y.

427 miles of New York State Thruway and Rockwood Fire Equipment is protecting it!

It takes versatile fire equipment to protect 427 continuous miles from fire — and Rockwood has just the equipment to do it!

Each of the twenty-three fire trucks used by the New York State Thruway Authority is equipped with — *Rockwood Manual Remote Control Turret, Type FFF FogFOAM . . . two Ground Sweep Nozzles . . . two Hand Line Nozzles with FF Extensions . . . a Piercing Applicator . . and a Type D Proportioner for Rockwood FOAM and WET.*

From New York City to Buffalo these highly maneuverable fire trucks are ready to quickly control gasoline, oil or brush fires — and thanks to Rockwood Double Strength FOAM — they can do a big job with a relatively small amount of water.

Rockwood Double Strength FOAM, the fast-flow fluid FOAM, makes a minimum of 2,640 gallons of expanded FOAM extinguishing agent — using only 330 gallons of water!

Many leading fire truck users rely on Rockwood fire fighting products. Send for Rockwood's free booklet. Get all the facts on Rockwood fire fighting equipment — just fill in the coupon below. The Rockwood products have been tested and listed by Underwriters' Laboratories, Inc.

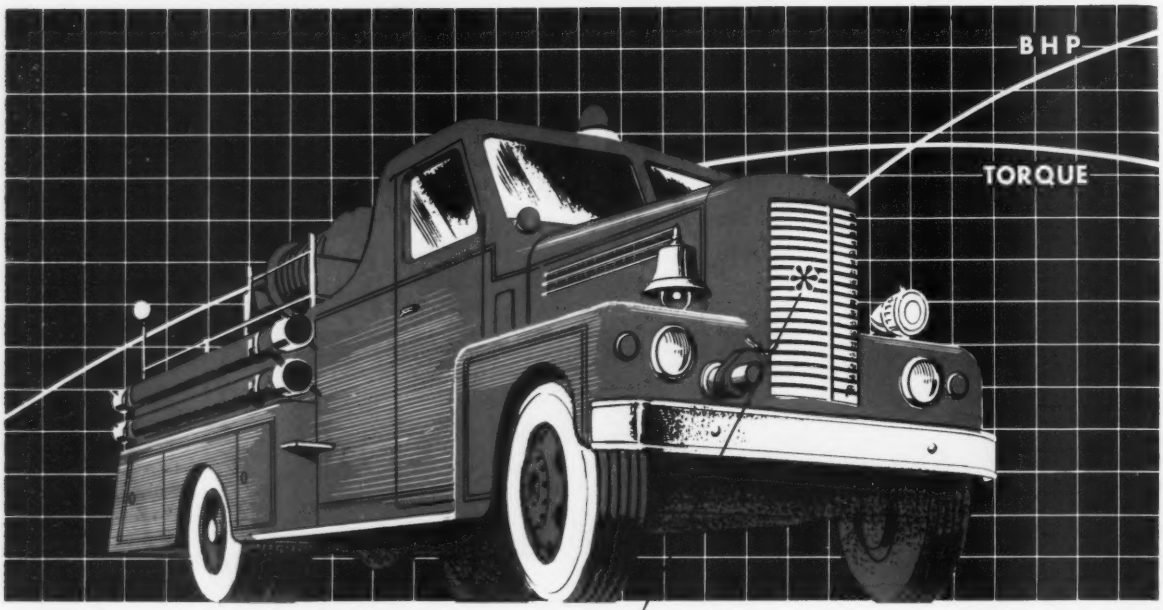
ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
2025 Harlow Street
Worcester 5, Mass.

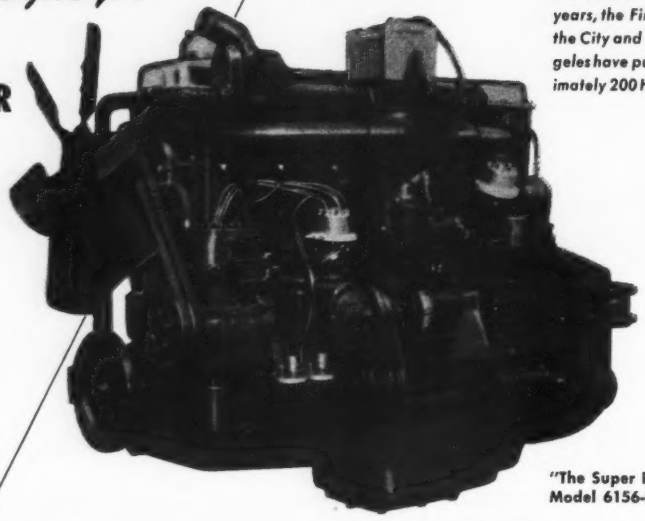
Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....
Title.....
Company.....
Street.....
City.....
Zone....State.....



HALL-SCOTT ENGINES *give you* *FAST* STARTS AND *DEPENDABLE* POWER

A testimonial to the leadership of Hall-Scott engines: Over the years, the Fire Departments of the City and County of Los Angeles have put into use approximately 200 Hall-Scott engines.



"The Super Fire Chief"
Model 6156-FE

Only Hall-Scott among truck engines offers the overhead camshaft. It is one example of Hall-Scott attention to excellence. The overhead camshaft has many advantages . . . most important, simple maintenance. It allows the entire head to be removed easily; valves may be ground right on the bench.

* Hall-Scott engines attack fast. Their torque charts show superb acceleration characteristics.

These engines with their long life are precision built to fire chief specifications. And they overhaul simply and economically.

For pulling or pumping, there is a Hall-Scott engine for your particular fire fighting requirements. Models range from 252 to 324 in honest horsepower; 750 to 2500 in guaranteed G.P.M.

Full details furnished gladly for specifying Hall-Scott for your new equipment or for engine replacement. Write the factory today for specifications and the name of your nearest dealer.

Perfection in packaged power

Hall-Scott
INCORPORATED

POWER DIVISION
2850 SEVENTH STREET • BERKELEY 10, CALIFORNIA

Natecs gives SAFE clearance of intersections . . .

even protects against collisions of two emergency vehicles

In the NATECS system, a receiver mounted on the traffic signal at the intersection picks up a beam from a transmitter mounted on the approaching vehicle. Traffic lights automatically set on the emergency pattern. Then a *white* light turns on, *assuring* the emergency-vehicle driver that the intersection is clear.

If *two* signals are received at an intersection from emergency vehicles approaching from different directions, the white light facing the *second* vehicle flashes on and off, warning that another vehicle has priority.

Operation on radar frequencies permits a *narrow* beam that won't affect any signals but those directly ahead (up to ¼ mile) of the emergency vehicle. Completely automatic. No need to flip a switch as the vehicle changes direction. And after the vehicle passes the intersection, traffic lights automatically revert to normal sequence.

EAGLE

EAGLE SIGNAL CORPORATION
Municipal Division
Moline, Illinois

Eagle equipment saves lives . . . saves time

MAIL COUPON TODAY

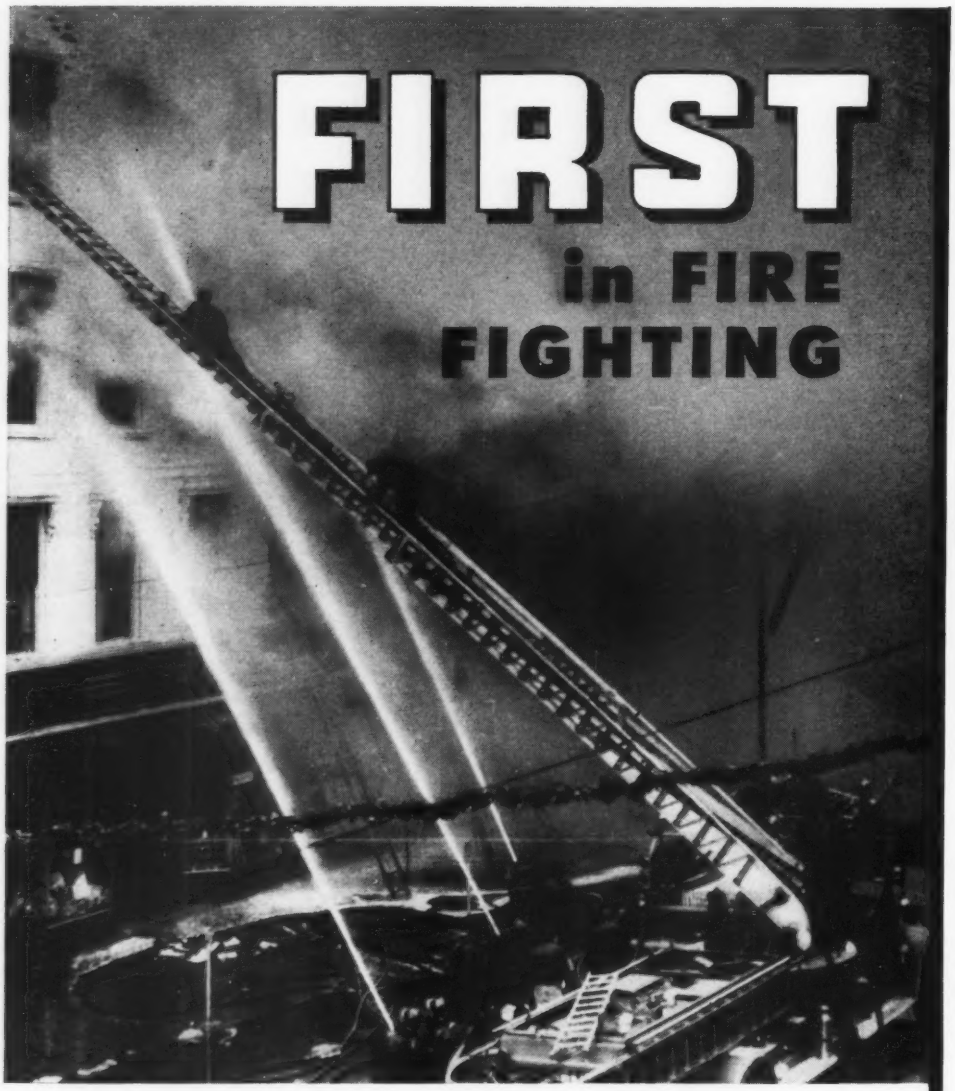
EAGLE SIGNAL CORPORATION
Municipal Division, Dept. FE-1057
MOLINE, ILLINOIS

Please send complete information on Eagle's new emergency traffic control system.

NAME AND TITLE

MUNICIPALITY

FULL ADDRESS



PIRSCH
EST 1897

WARD LA FRANCE

CENTRAL

FWD

Fire Master Corp.

OREN

AHRENS-FOX
C. D. BECK & CO.
Sidney, Ohio

Thibault

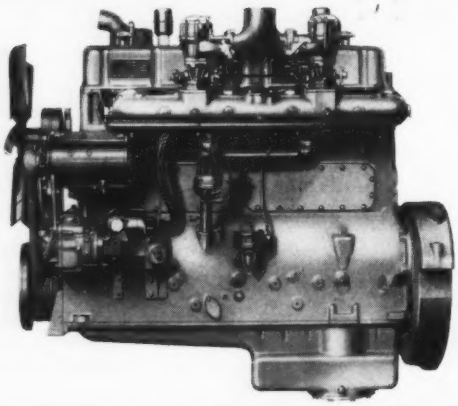
UNIVERSAL

GENERAL FIRE TRUCK CORP.

MAXIM MOTOR COMPANY
MAXIM
MIDDLEBORO MASS.

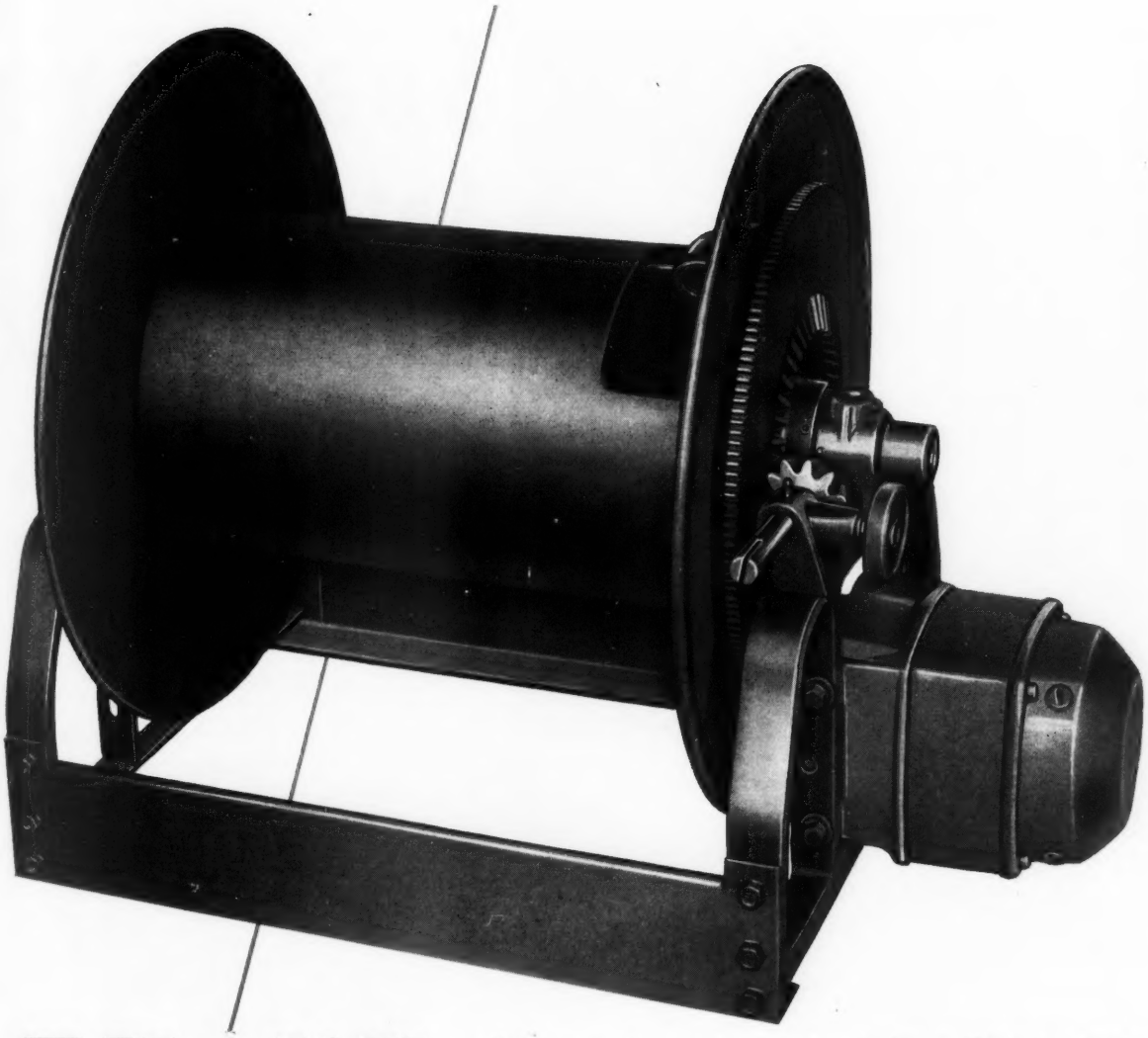
HF
HOWE

Model 145-GZB—270 hp range High-Output Fire Fighter— Six cylinders, 5⅜-in. bore x 6-in. stroke, 817 cu. in. displ., with counterbalanced and vibration dampened 3½-in. 7-bearing crankshaft; dual downdraft carburetion; dual ignition; precision extra high capacity bearings; removable wet type cylinder sleeves, aluminum pistons, overhead valves with Stellite-faced exhaust valves and seats. Arranged for full electrical equipment and all modern accessories. Get Bulletin 1662.



352-R *Waukesha Motor Company, Waukesha, Wis., New York, Tulsa, Los Angeles*

WAUKESHA *FIRE FIGHTER* ENGINES



THANK YOU

Your increasing preference for Ardmore Reels is deeply gratifying to us. For we spare no effort to build into these better reels the swift, smooth, sure performance modern fire-fighting demands.

Ardmore Fire-Fighting Reels are now available in explosion-proof, starter-motor, and hand-wind models...single or dual ...with or without hose rollers. All models are competitively priced. Complete catalog on request. Write, wire or phone:

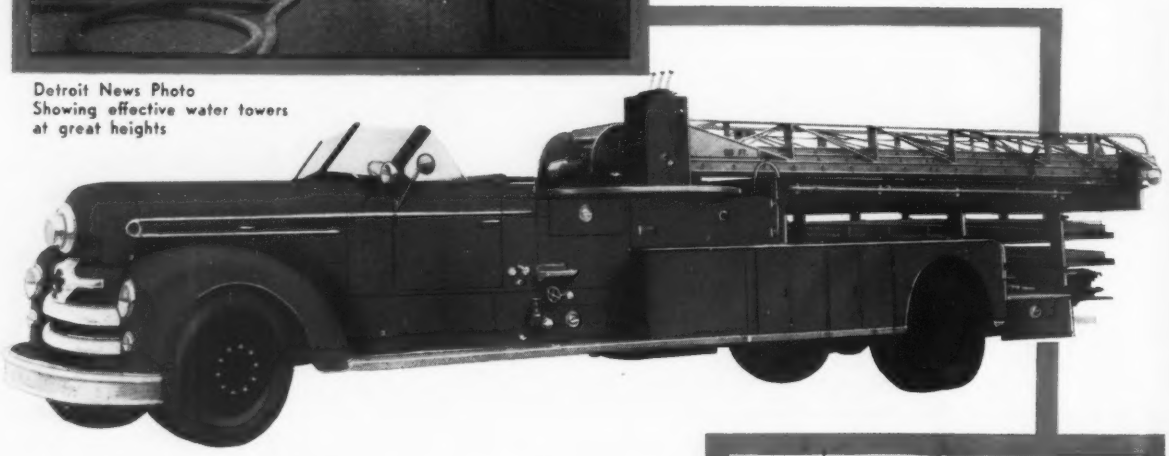
ardmore products

NORTHBROOK
ILLINOIS
CRESTWOOD 2-5000

Detroit News Photo
Showing effective water towers
at great heights

Seagrave Safety Steel AERIAL LADDER

. . . Seagrave quality construction — your assurance of greater safety and greater dependability!



This safety-steel aerial ladder is built as only Seagrave can build it . . . quality construction throughout. It has every refinement, every feature made possible by Seagrave advanced engineering . . . All welded construction, trouble-free hydraulic power hoisting, positive ladder locks for each extension section, one man control, Seagrave V-12 engines, shorter wheelbase. When it is something as important as fire apparatus nothing but the finest should be considered. Those extra dollars invested in Seagrave bring you extra quality, value and service.

SEAGRAVE *THE GREATEST NAME IN FIRE APPARATUS*

MAIL THIS COUPON

The Seagrave Corporation,
Columbus 7, Ohio.

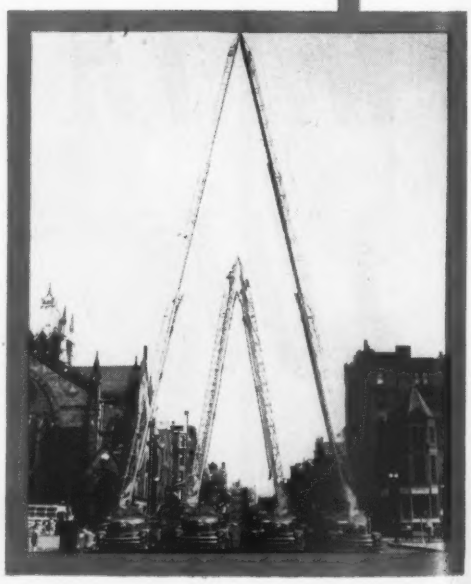
Send complete information regarding Seagrave Safety Steel Aerial Ladder trucks.

Name_____

Street Address_____

City_____ State_____

F.E. 10-57

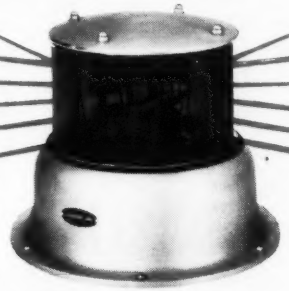


Boston, Mass.

The NEW CARPENTER "RAR"

Clears the way... FAST!

The high-power RAR Rotating Beacon is specially designed for fire, state & city police, ambulance, and other requirements where extreme dependability and intensity are essential.

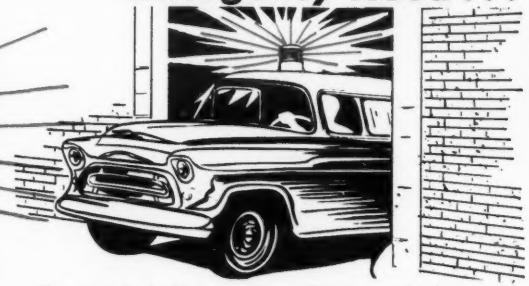


A powerful, colored spot of light rotates horizontally projecting its beam through a full 360°. Mounts on any vehicle roof or may be used as stationary beacon. Sturdy simchrome construction. RAR (Standard Size).....$49.50

RAR Sr. Full chrome over bronze and brass.....$62.50
(Large size as illustrated)

Cap protects lens of every RAR

A Light for Every Emergency Need...



For nearly half a century, Carpenter-Lights have been first choice of fire and police departments, of utility companies, of industry. When you need beacons, portable lights, spotlights, or stand-by emergency lights . . . *You need Carpenter-Lights.*

Complete catalog on request.

CARPENTER
MANUFACTURING COMPANY
202 Bradley Street • Somerville 45, Mass.

for power to spare
on the way... at the fire...

Specify

Leece-Neville ALTERNATOR SYSTEMS

the best generator equipment you can buy!

Two-way radios, sirens, warning lights, rescue equipment—all combine to place a heavy load on your apparatus batteries. More of a load than the batteries can handle—*unless* you've installed Leece-Neville alternator systems!

Because they produce charging current *as soon as the engine starts*...enough to handle two-way radio transmitting loads... Leece-Neville alternators keep batteries charged . . . ready for fast, sure emergency starts in coldest weather!

And, high speeds can't damage L-N alternators ...they're designed for operation up to 12,000 rpm! What's more, L-N constant voltage level control assures peak radio performance . . . lengthens life of radio components.

Leece-Neville alternators, the original ac-dc generating system, have been used since 1946 as standard generating equipment on hundreds of fire apparatus fleets, both large city and rural volunteer departments. On any type of apparatus, large or small, L-N alternators will set new standards of performance while reducing operating and maintenance expense. For all the facts, see your local L-N distributor or write direct to The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities . . . service stations everywhere.*

plenty of 110 volt power, too!

For abundant 110 volt power to operate floodlights, power tools, rescue equipment, etc., install a Leece-Neville 110 volt transformer and rectifier in conjunction with the alternator. Ask for special bulletin.

AA 1014

YOU CAN RELY ON Leece-Neville

Automotive Electrical Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY

ALTERNATOR SYSTEMS | D C GENERATORS | REGULATORS | CRANKING MOTORS | SWITCHES | SMALL MOTORS

Chief T.P. Treadwell of Fort Collins, Colorado

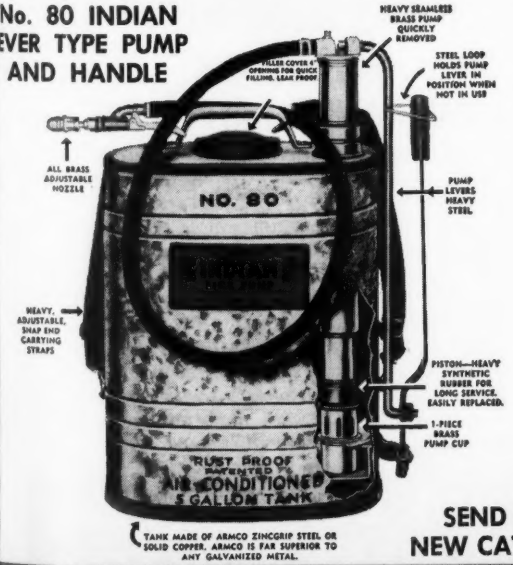
(Winner of 1st place in fire prevention in cities of less than 20,000)

SAYS:

"INDIAN FIRE PUMPS are an indispensable fire fighting tool!"

We are proud of the fact that INDIAN FIRE PUMPS have played a part in enabling the city of Fort Collins, Colorado to win many awards for fire prevention. Members of Engine Co. No. 1 are shown here with their INDIANS.

No. 80 INDIAN LEVER TYPE PUMP AND HANDLE


HEAVY SEAMLESS BRASS PUMP QUICKLY REMOVED
STEEL LOOP HOLDS PUMP LEVER IN POSITION WHEN NOT IN USE
ALL BRASS ADJUSTABLE NOZZLE
NO. 80
PUMP LEVERS HEAVY STEEL
HEAVY, ADJUSTABLE, SNAP END CARRYING STRAPS
PISTON—HEAVY SYNTHETIC RUBBER FOR LONG SERVICE. EASILY REPLACED.
1-PIECE BRASS PUMP CUP
RUST PROOF
AIR CONDITIONED
5 GALLON TANK
TANK MADE OF ARMCO ZINCGRIP STEEL OR SOLID COPPER. ARMCO IS FAR SUPERIOR TO ANY GALVANIZED METAL.

No. 90 INDIAN SLIDING PUMP TYPE

All Seams are Electric Welded—no leakage. Pump throws 30 ft. pressure stream or nozzle adjusts for spray. Strongly built — lasts for years. Many **INDIAN FIRE PUMPS** over 20 years old are still in service.

BOTH TYPES ARE APPROVED BY UNDERWRITERS LABORATORIES

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for Men of ACTION!

The Original MIDWESTERN

STRIPED SAFETY COAT

Reduces Accidents—Saves Lives

When working under hazardous conditions in smoke, fog, dust and darkness, you deserve the safety protection found *only* in the Midwestern Striped Safety Coat. The highly visible yellow stripes are *rubberized as part of the material* . . . not glued, painted or sewed on. Tests show that Midwestern yellow stripes retain their natural color and have the same durability as the black fabric.

There are many imitations but no substitute for the superior quality, design, fabric texture and outstanding safety features of MIDWESTERN SAFETY CLOTHING FOR FIREMEN!

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For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

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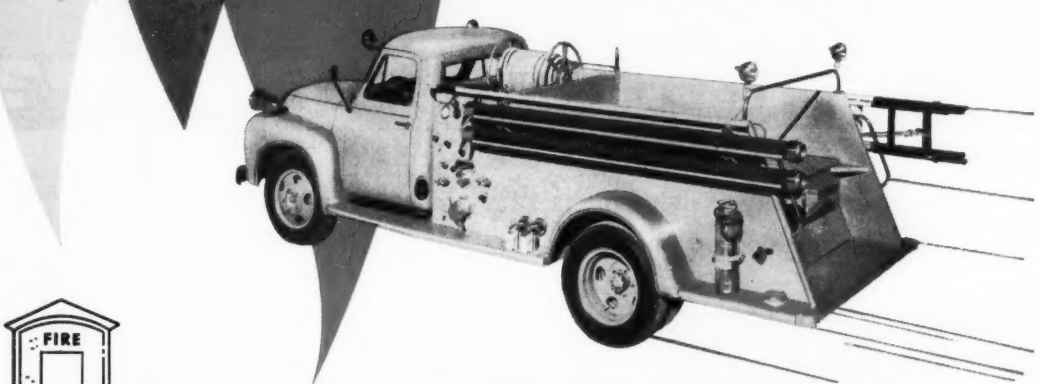
In case of fire . . . call BOARDMAN!

If you are one of the many chiefs . . . from coast to coast . . . who have had the experience of purchasing and working with a BOARDMAN-built pumper, you've experienced the combination of fire truck performance with the economy of a commercial chassis. There are many, many advantages.

BOARDMAN custom built fire fighters are really dependable. Each is equipped with the famous Waterous pump . . . the standard of the industry.

And a commercial chassis assures you of a quick, local source of truck parts, so necessary for emergency vehicles.

Let us send you the complete BOARDMAN story. Just drop us a line TODAY!



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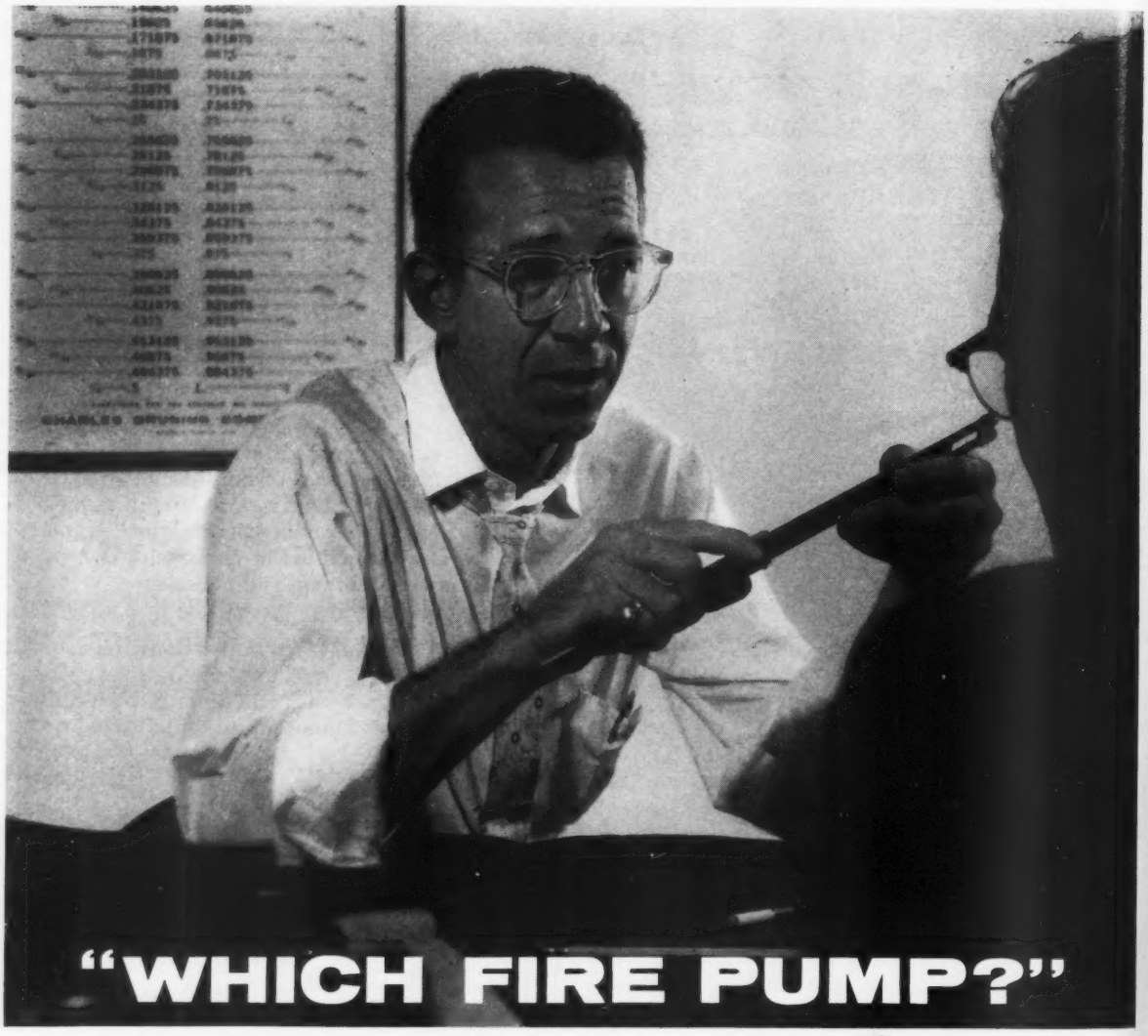
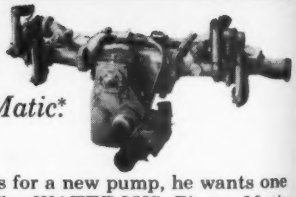
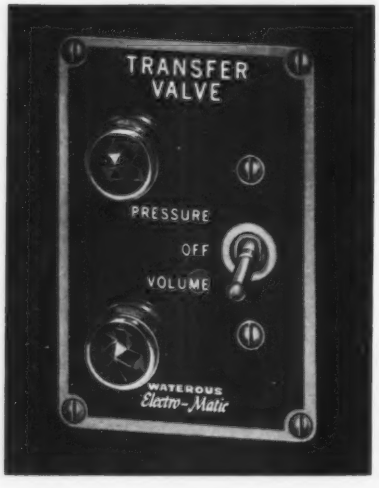


"WHICH FIRE PUMP?"

He's looking ahead! He's looking for the most modern, the most dependable fire pump—he'll find it in the WATEROUS *Electro-Matic*.*





When the master mechanic draws up specifications for a new pump, he wants one that will stay in service and out of the shop. The WATEROUS *Electro-Matic* answers that need with proven dependability, backed by seventy years of priceless experience. Electro-Matic (for fast shifting, priming and pumping), oil-lubricated ball-bearings throughout, plus rugged bronze and stainless steel at points of close-running tolerance. The exclusive two-piece horizontally split casing gives the utmost in accessibility, simplicity, freedom from leaks. Faster, safer, more dependable performance.

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Electro-Matic

*Registration applied for.

New 1000-A SERIES

DUO Safety

ALUMINUM FIRE LADDER

***with Exclusive* DUO-SAFETY TONGUE and GROOVE CONSTRUCTION**

- **NO HOOKS or GUIDES to injure hands!**
- **NO JACK-KNIFING!**

Now, Duo-Safety's exclusive tongue and groove arrangement is extended to a great new ladder line... the new 1000-A Series. This outstanding construction design holds the sections together absolutely firmly and rigidly, with no obstructions of any kind!... requires a minimum of banking height ...is more compact with minimum weight. It's the greatest development in fire ladder construction in years and years!

Other Features:

(A) EXTRA STRONG
Light Weight Channel Construction

(B) RUNGS ELECTRICALLY WELDED
to Outside Channel

(C) RUNGS INTERNALLY EXPANDED
on Both Sides of Rung Plate

(D) NON-SHEARING RIVETS

... and, of course, all non-aluminum metal parts are plated for longer, non-rusting service.

DUO Safety

The 1000-A SERIES Offers Another Choice of an ALUMINUM LADDER for PUMPER USE

Series 1000-A has the identical construction, in lighter weight, as the Duo-Safety 900-A Series, and is a substitute for the famous 700-A Series. This sensational new ladder is available in 2 (Series 1000-A) and 3 (Series 1025-A) section ladders, in lengths up to 30 feet, and expands the Duo-Safety line of aluminum ladders for pumper use to offer a ladder for every requirement.

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AT THE FIRST HOT BREATH OF FIRE

KIDDE'S ATMO ALARM SYSTEM

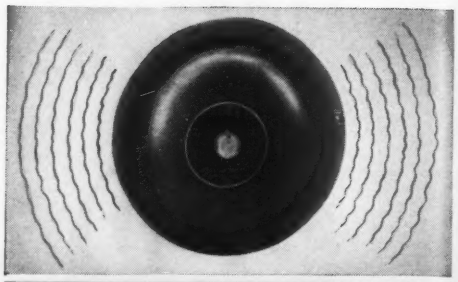
(using rate-of-temperature-rise tubing)

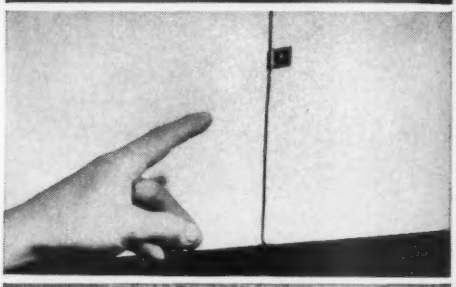
TRIGGERS ALARM AT FIRE AREA

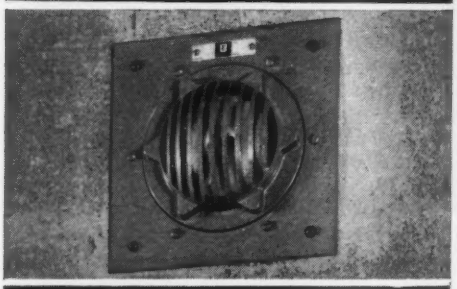
(outside building or at local fire department)

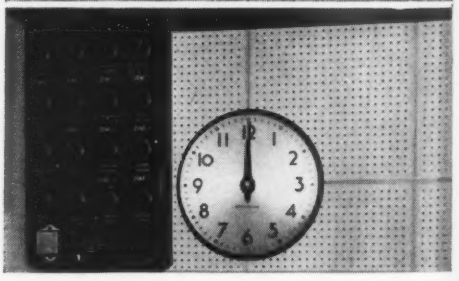
GIVES FIRE LOCATION AT ANNUNCIATOR PANEL

(usually at manned telephone switchboard)









Save priceless lives, save valuable buildings with Kidde's Atmo Fire Alarm System. This wide-area automatic fire detecting and warning system sounds alarm almost the moment fire starts. Ideal where life protection and early fire warning is essential, the Kidde Atmo system operates independently of regular power sources, gives protection even if outside power fails. What's more, the system can close doors, shut off fans, motors, blowers. Is automatically self-resetting after use or test. Write today for Kidde's Atmo Alarm System booklet.

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A Subsidiary of
Walter Kidde & Company, Inc.

DEFEND YOUR COMMUNITY

Fire Equipment—American LaFrance. Power—Continental Red Seal S-6749 Engine.

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Equipment Using CONTINENTAL POWER

Fire apparatus is subjected to the sort of usage which underscores the need for extra care in its choice. Here, as in any field where round-the-clock reliability is a must, it's wise to standardize on a leading make —a make that features Continental Red Seal power.

Red Seals are the product of more than a half-century of specialized experience. Every model is engineered expressly for the job to be done . . . and backed by factory-authorized service and genuine Red Seal parts throughout the world.

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ONLY IN CONTINENTAL RED SEAL WILL YOU FIND ALL THIS: Full-Length Water Jackets • Patented Individual Porting • Tocco-Hardened Counterbalanced Crankshaft • Seven Main Bearings • Alloy Steel Valve Seat Inserts • Leakproof Water Pump • Built-In Oil Cooler • Positive Crankcase Ventilation • Positive Rotation Exhaust Valves.

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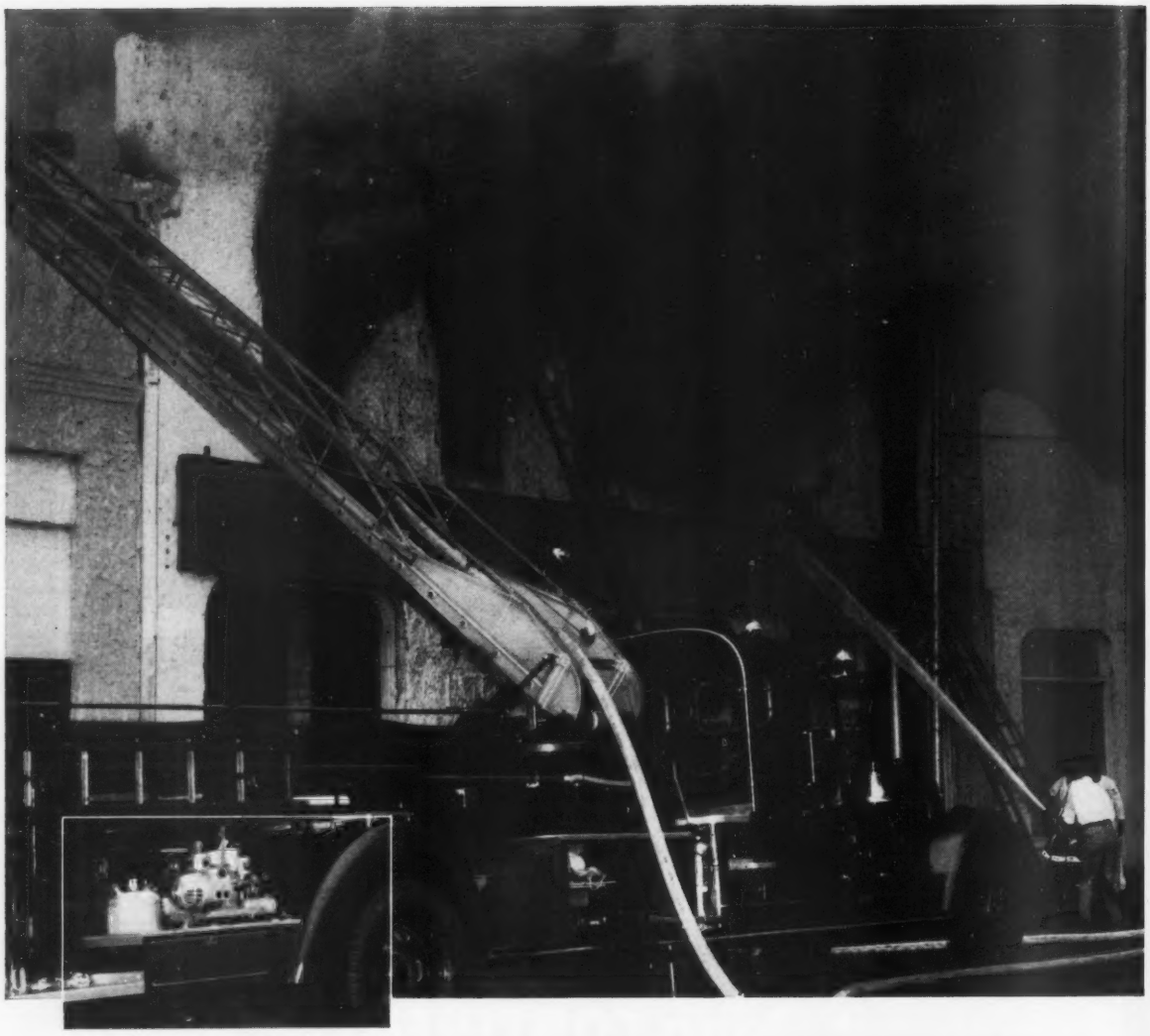
Continental Motors Corporation
MUSKEGON, MICHIGAN

WORLD'S LEADING INDEPENDENT MANUFACTURER OF INTERNAL COMBUSTION ENGINES, CONTINENTAL MOTORS OPERATES PLANTS IN ATLANTA, DALLAS, DETROIT, MILWAUKEE, MUSKEGON, AND TOLEDO, AND IN ST. THOMAS, ONT., PRODUCING AIR-COOLED AND LIQUID-COOLED ENGINES FOR USE ON LAND, AT SEA AND IN THE AIR.



Jacksonville, Florida Fire Department truck and Homelite 23A115 Generator — *on the job* — at a recent fire in Jacksonville.

Instant POWER *that can be carried anywhere!*

Fire Departments throughout the country use Homelite Generators . . . and it's easy to see why. Lightweight Homelite Generators feature constant voltage control, generous overload capacity, proven dependability . . . and they're easy to carry anywhere to provide power whenever it is needed — quickly, effectively, economically.

For example, the photograph above shows a Homelite Model 23A115 Generator — ready for action — on a Jacksonville, Florida Fire Department truck. This 1500 watt, gasoline-engine-driven unit provides 115 volt, 60 cycle, alternating current. It starts fast in any weather . . . supplying electric current identical to normal house current — perfect for emergency stand-by use, operating electric tools and floodlighting fire scenes at night.

If you are not already using a lightweight, dependable, Homelite Generator — get in touch with the nearest Homelite representative. There's a Homelite Carryable Generator for every power requirement . . . in all standard voltages . . . capacities up to 5000 watts.

Manufacturers of CARRYABLE PUMPS, GENERATORS, BLOWERS AND CHAIN SAWS

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A DIVISION OF TEXTRON INC.
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Early Delivery on

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Fireball Special

America's NEW low-cost fire truck

In response to popular demand, production lines at Ward LaFrance have been set up to permit early delivery of Fireball Specials. Now . . . in a matter of days . . . this modern, low-cost truck can become part of your fire-fighting force. Proven in service over the past two and one half years, this truck has received widespread praise and public acceptance.

The Fireball Special is engineered and built for long years of hard service . . . offers quick starting, fast flexible operation and generous pumping power. Particularly well-suited for suburban and rural fire company use, it incorporates a Chrysler Firepower 183 HP standard or 203 HP optional engine, 500 or 750 GPM Waterous Electro-Matic pump, 500 gallon booster tank, plus other outstanding features.

This modern low-cost pumping engine has proved itself in all kinds of fire service from Maine to Texas and from the east coast to the Rocky Mountains. Write for full details on the Ward LaFrance Fireball Special. Don't wait, do it now!

WARD LA FRANCE TRUCK CORPORATION

Fire Apparatus Manufacturers for over 39 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue, Elmira, N.Y. Tel. 3-5631. **DIRECT FACTORY BRANCH:** 139th Street & Bruckner Blvd., New York 54, N.Y., Tel. CYpress 2-3300. **EXPORT:** Ward LaFrance International, Inc., Elmira, N.Y., U.S.A., Cable Address: "Wardtruck"

Now! 3 Alco-Lite Ladders for short wheelbase Pumpers... Old or New

Shown above is an Alco-Lite Pumper Roof Ladder and 2 Section Extension Ladder nesting in brackets designed for wood ladders. The nested thickness of the two is 6⅞". This pair not only makes an ideal replacement on old Pumpers but is very desirable equipment on new Pumpers.

3 Section Pumper Extension Ladder

The newest addition to the Alco-Lite Pumper series is a 3 Section Pumper Extension Ladder which is made in 30' and 35' models. Only 7" thick, the 3 PEL will nest by itself in brackets found on most Pumpers. On new Pumpers, the 3 PEL can be specified to nest with an Alco-Lite Pumper Roof Ladder. The 3 Section Pumper Extension Ladder has a rope and cable arrangement which allows the ladder sections to extend simultaneously. It is also equipped with spring loaded locks which operate automatically at any desired point.

Always specify Alco-Lite Aluminum Ladders

Alco-Lite Pumper Ladders are stronger and easier to handle because they are made of high tensile strength, industrial, aluminum alloy. Their deeply grooved, 1¼", rungs are permanently attached to the extra heavy gauge, double channel, side rails with expansion bushing construction. Alco-Lite Pumper Roof Ladders feature, in addition, extremely strong, folding steel hooks.

original manufacturer of aluminum ladders

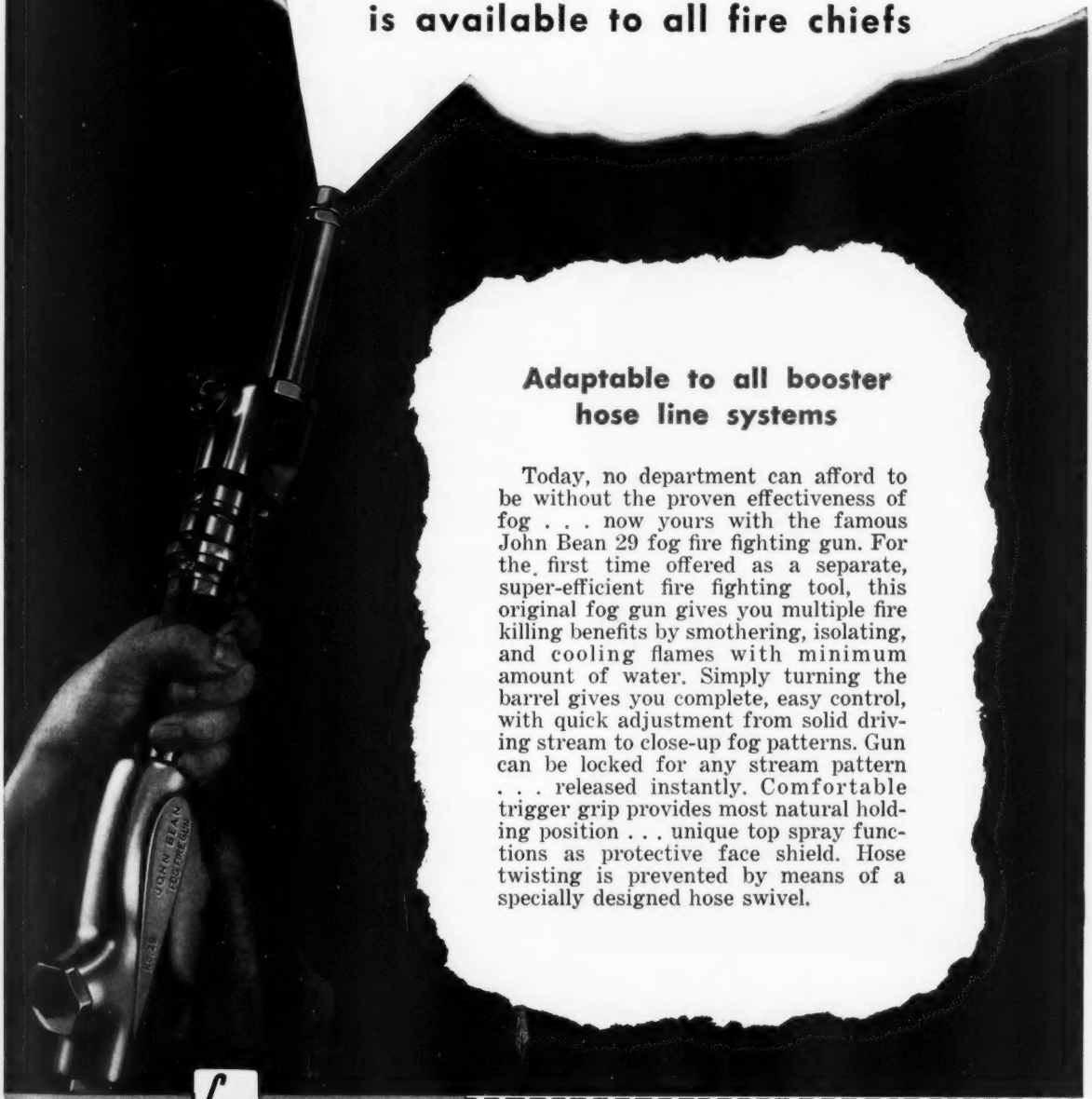
ALCO-LITE

Aluminum Ladder Company

WORTHINGTON PENNSYLVANIA

NOW the original John BEAN 29 FOG FIRE FIGHTING GUN

is available to all fire chiefs



Adaptable to all booster hose line systems

Today, no department can afford to be without the proven effectiveness of fog . . . now yours with the famous John Bean 29 fog fire fighting gun. For the first time offered as a separate, super-efficient fire fighting tool, this original fog gun gives you multiple fire killing benefits by smothering, isolating, and cooling flames with minimum amount of water. Simply turning the barrel gives you complete, easy control, with quick adjustment from solid driving stream to close-up fog patterns. Gun can be locked for any stream pattern . . . released instantly. Comfortable trigger grip provides most natural holding position . . . unique top spray functions as protective face shield. Hose twisting is prevented by means of a specially designed hose swivel.

John fmc® **BEAN**

Lansing 4, Michigan San Jose 1, Calif.

ORIGINAL FOG FIRE FIGHTING GUN

Food Machinery and Chemical Corporation

SEND COUPON for details TODAY

I am interested in the original John BEAN 29 Fog Fire Fighting Gun.

Please send complete information to me.

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Address_____

City_____ State_____

Meets the 4 most important Fire-Fighting Hat requirements

...THE M·S·A STREAMLINED FIREMAN'S HELMET

Protection from falling or flying objects, resistance to electric shock, comfort on the job, and durability in service add up to the four-point standard for modern fire-fighting helmets. On each count, the M.S.A. Fireman's helmet has proved its superiority because of these design and material-selection features:

1. IMPACT PROTECTION—The one-piece, laminated construction of the plastic, which is molded under high pressure, takes bumps and blows without passing them on. Reinforced ridge at top aids deflection; sturdy crown hammock cushions blows.

2. DIELECTRIC STRENGTH—A special plastic, selected for its natural resistance to electric shock, is used for the shell construction. Nonabsorbent, this material gives protection that isn't affected by moisture conditions.

3. COMFORT—Very light weight and perfect balance eliminate job fatigue. Soft leather sweatband with sized or adjustable lining permits perfect fit without pressure points. Space between band and hat provide ventilation.

4. DURABILITY—Helmet will not soften or deteriorate when exposed to water or common chemicals. Material and design prevents twisting or warping when exposed to heat.

MSA
SAFETY EQUIPMENT HEADQUARTERS

Streamlined design has plenty of eye appeal. Shields are made of full-grained leather in black, white or red. Color combinations available. Easily zipped-in winter linings assure all-weather comfort. Write for details.

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Call the M.S.A. man on your every safety problem . . . his job is to help you

VOL. 110, NO. 10

FIRE ENGINEERING

THE JOURNAL OF THE FIRE PROTECTION PROFESSION SINCE 1877

OCTOBER, 1957

℞ for Fire Prevention!

Fire Prevention Week (October 6-12) this year marks the 50th Anniversary of organized fire prevention, according to the National Board of Fire Underwriters. This same authority states that for the first time in history, fire losses for this year may exceed $1 billion. And worse than this, loss of life by fire will total between 11,000 and 12,000 persons.

This would appear to be a dismal picture. Actually, however, it is not as black as it seems. Although tragic, the losses are not uniform the nation over, nor is the effort at fire prevention fruitless. Quite the contrary. It has been demonstrated—and is being proved daily—that fire prevention can be made to pay dividends when it is planned and executed intelligently, consistently—and persistently.

This doesn't mean annual hypodermics or "crash campaigns," an occasional lecture in the public schools, an enclosure with the water bills or an infrequent item in the daily press. Printed publicity is excellent, but it is the painstaking, persistent, personal effort that must be the core of any productive fire prevention effort.

Just as fire fighters must first locate the fire before they can extinguish it, so must they ferret out those causes which propagate and breed fires before they can remove them, to prevent those fires.

Hunting out those hazards can only be done in one way: By personal contact—by inspection of all premises which are known, or suspected to harbor potentialities for fire. Today, that means not the occasional visit of an uninspired fire company inspector, or the perfunctory call of a member of the fire prevention bureau. It means systematic inspection up and down the line by every possible interest—by fire companies in the field, by company offices and inspectors and by fire prevention specialists. It means supporting and implementing these contacts with the latest approved promotional effort—printed and spoken. And it means not only uncovering the violations but prosecuting the violators.

Today's fire prevention means less "home work" at the fire station, and more "home work" where people live, labor and play. It means the fire fighter no longer waits, but works between alarms. Paradoxically, the harder he works at inspection-fire prevention, the easier and safer his job of fighting fire. And the more effective his preventive efforts, the more productive the taxpayers' investment in him.

Director of Public Safety Joseph F. Sestric of St. Louis, told the delegates to the IAFC Conference in New Orleans: "Costs of operating fire departments are mounting tremendously . . . it is essential that we get the maximum value out of the money invested in our departments. Certainly the field of fire prevention offers us the greatest hope today of reducing our fire fighting costs."

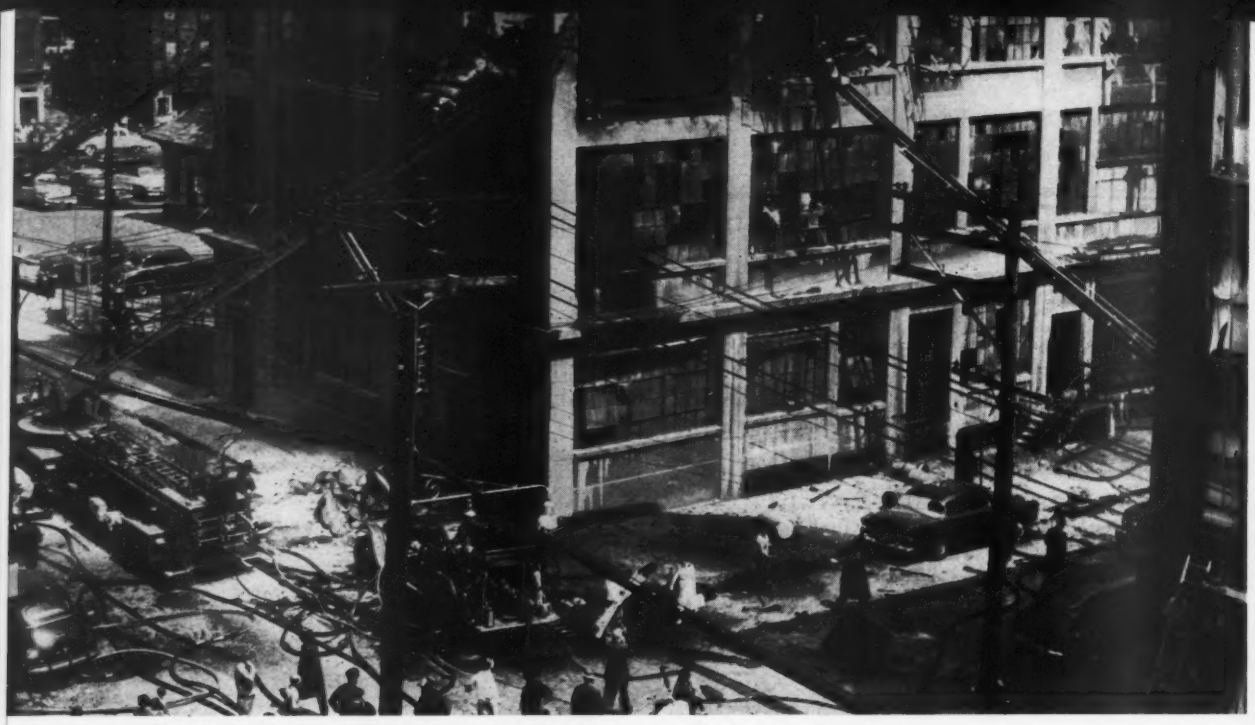
He and every other fire commissioner and fire chief who has truly pondered the problem of reducing our staggering fire waste agree that the answer can be summed up in one word: *"Inspections . . . inspections . . . and more inspections!"*

Modern radio has implemented inspections as has no other single factor in fire service history. Radio field inspections need no embellishment here—their worth in reducing fire hazards and fires, has been conclusively demonstrated from coast to coast. Even in places with no radio, productive inspections are possible. Among the oldest organizational prevention activities are the "town inspections," over 4,000 of which have been conducted during the past half-century. Town inspections can be arranged with insurance and rating groups, with local civic organizations, including merchants and manufacturers whose very places are due for inspection.

Town inspections help reduce fire hazards and consequently fires, thereby saving lives particularly in the "high value" classifications, while home inspections get to those places wherein are found the greatest number of fires—and the heaviest life losses.

There are many ways of practicing inspections—all of them good. Many of these have been reviewed in FIRE ENGINEERING (Did you read last month's account of Seattle's telephone home inspections?). No fire department, volunteer or professional, is too big or too little to ignore the beneficial results of well planned and carried out inspections.

Roi B. Woolley



Jersey City fire fighters using fog quickly control fire following fatal blast in Gregory milling plant. Explosion centered on third floor and blasted two large slabs of concrete across street. Flaming debris spread fire to two exposed tenements—*Van News Photo Inc.*

Fatal Processing Plant Blast Has Far-Reaching Repercussions

Alert fire chiefs, following explosion, unearth soot cleaners being sold over a wide area, advertised as "inflammable but not explosive" but which contains ingredients that sparked Jersey City explosion. Incident raises interesting questions of responsibility and liability

ON AUGUST 22, John Solkowski, began pulverizing a quantity of powdered material in the plant of the Walter C. Gregory Corporation, custom millers, 480 Henderson Street, Jersey City, N. J. The mixture consisted of potassium nitrate, sulfur, charcoal and anti-caking agent, which was marketed as a chimney cleaner.

This chemical compound had been blended on the first floor of the plant in a single batch of 5,400 pounds. It was found that lumps existed in the product and it was decided to pulverize it before shipment to the packager.

Half of the mixture, which was contained in 11 drums holding 200-250 pounds each, was taken to the third-floor location of the pulverizing machine and the other half remained on the first floor.

At 12:36 p.m., as shown by the time clock, which stopped at that instant, a violent explosion occurred in the area of the milling machine killing Mr. Solkowski and destroying the entire quantity of powder near the machine; sections of walls, steel window frames and flaming debris were widely scattered over the neighborhood. Fire immediately occurred in the plant and involved two nearby tenement houses as well as some parked cars.

The building owned and occupied by the firm was four stories of fire-resistive concrete and steel construction, located on the corner of Henderson and Eighth Streets. It measured about 100 by 75 feet and had a one-story extension of similar construction extending about 25 feet along Eighth Street.

No sprinklers

The premises were equipped with an automatic fire detection system connected to a central office but there was no sprinkler protection, standpipes or a plant fire brigade. First-aid fire extinguishers of the 2½-gallon soda and acid type were located throughout the building. It was later determined that the explosion destroyed the transmitter of the fire detection system preventing transmission of the alarm to the central office. It is reported that the exterior building alarm connected to the system did operate.

The Gregory company operated a custom milling service for pharmaceuticals,

rare herbs, roots, gums, chemicals and other substances which require fine grinding. Various quantities of these substances were located in the building at the time of the fire. While many of the materials milled by the company were known to be hazardous from the point of view of fire, none was considered to be explosive. A company official reported to the fire department that it was not realized at the time that the chimney cleaning compound was dangerous.

The company normally employed 16 persons but on the day of the explosion only 13 people were working.

Fire Department's last inspection

The plant had been inspected by the fire department in July 1957 and it was noted at the time that no special hazards, other than dust usual for such occupancies, were present. The previous fire record of the company at the location was reported good.

Two small fires had occurred in recent years: one on December 2, 1954, and the second on January 13, 1955. In both instances the cause was attributed to foreign matter in material being ground and only slight damages were reported. On one fire a booster line was employed for extinguishing with 50 gallons of water. The other was extinguished by first-aid appliances.

Exposure hazards

On two of the corners facing the plant were old-law tenements. On the west was a four-story tenement of ordinary construction housing about 12 families at 481-487 Henderson Street.

On the south a five-story tenement of ordinary construction housed 15 families at 478 Henderson Street. In both tenement rows small mercantile establishments and stores occupied some of the ground floor space.

Diagonally across the street corner a vacant lot separated rows of three-story tenements which extended along both Henderson and Eighth Streets.

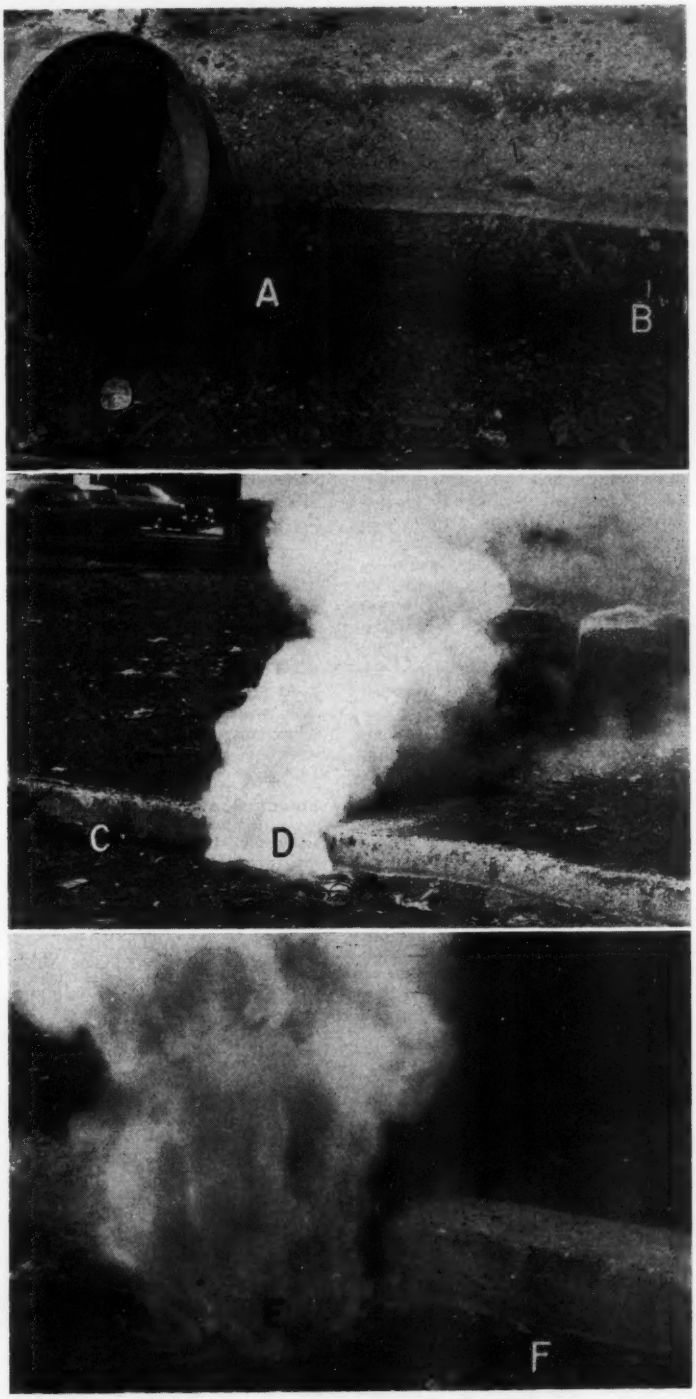
Fire operations

It is not known who pulled Box 23, Grove and Seventh Streets, but the first alarm was received from this box at 12:37 p.m. The origin of the fire and explosion was determined by the fire department to have been in the immediate area of the pulverizing machine. Deputy Chief Michael Burke and Battalion Chief Leo Duffy responded with three engine and two ladder companies on the first alarm.

The explosion blew out two huge slabs of concrete facing on the third floor, each estimated to weigh five tons. One of these pierced a brick wall of a store front on the ground floor of an exposed tenement at 478 Henderson Street. Debris damaged ten automobiles parked nearby and several of these were also damaged by flames.

The roof of 481 Henderson Street was set on fire as well as the coping of the

Fire Department conducts experiments to determine flammability of cleaner compound



Top: Small pile of compound (A) and trailer (B) leading to it. **Center:** Trailer (C) and (D) is ignited. **Bottom:** Ignition of small pile (E) and scar (F) left by burned trailer—*Photos by Captain Lawrence C. Connin, Jersey City F. D.*

SOOT KLEEN and SCALE REMOVER eliminates soot and carbon from oil burner units, boiler tubbs, hot air furnaces, hot water and steam boilers, smokestack, flues and chimneys
Increases the efficiency of your unit
Keep in a dry place, dampness will not affect the efficiency or strength of Soot Kleen, but will cause it to lump. Should this happen, pulverize and proceed
Apply lightly into flues and combustion chambers
Soot Kleen is highly inflammable but not explosive. Care should be taken in using
A PROVEN PRODUCT
KING CHEMICAL COMPANY
Mount Vernon, New York
A Wonder PRODUCT
KING
Soot Kleen
Fast Acting
Fire Scale & Soot Remover
CAUTION
KEEP PACKAGE AWAY FROM FIRE
DIRECTIONS
Operate the burner for 5 - 10 minutes then shut off. Apply the Soot Kleen directly into the combustion chamber
Limit each application to about a teaspoonful.
Fire door and draft damper should be kept open, this controls the draft and hastens the action.
If boiler is very sooty, open the flue doors and apply on the surface of the flues before introducing into the combustion chamber. If the burner is not in operation or cannot be operated, proceed as above, then ignite with burning paper
Contents—Approx. 2 Lbs

Product label cautions user to keep package away from fire and states material is highly inflammable "but not explosive." The directions for use recommend that each application be limited to about one teaspoonful

store on the ground floor of 478. Windows over the entire neighborhood were blown out and power and telephone lines in the immediate vicinity were knocked to the ground, creating an additional hazard. Some of the lines were carrying 2,400 volts at the time.

When Chief Burke arrived he saw fire on the third floor of the plant as well as in two of the tenement exposures. He immediately ordered a second alarm by radio which was recorded at 12:40 p.m.

Deputy Chief Jules A. Rifflard, acting chief in the absence of Chief Maloney (on vacation), responded on the second alarm and immediately upon arrival ordered a third alarm. This was recorded at 12:44 p.m.

Chief Rifflard noted that the third floor of the Gregory Building was fully involved with heavy smoke and visible flames. Smoke also was coming from the second and fourth floors of the plant. Because of the heavy debris damage he ordered a thorough search of all buildings in the neighborhood for injured persons.

With the exception of the exposure and debris fires the main body of the fire was contained inside the factory. Hand lines were taken to the third floor over aerial ladders and up a stairway on the Eighth Street side of the building. The flames were knocked down by six 2½-inch fog lines while a single 2½-inch fog line was used on the small amount of fire that existed on the second floor; one 2½-inch fog line was taken to the fourth floor but no fire was found. The fire was extinguished in about 30 minutes.

Other individual lines were used to extinguish the exposure fires and several booster lines and 1½-inch lines were stretched to put out the debris fires scattered over the streets.

At no time were master streams used. The water tower and turret wagons which responded on the greater alarms were quickly returned to service.

Salvage operations

During the extinguishing operation the salvage squad spread 24 covers to protect stock and machinery on the first and second floor. Following extinguishment, the fire department cleaned the broken glass from all windows in the neighborhood and covered them with tarpaper for protection against weather.

The fire was declared officially out at 11:58 p.m. although most of the companies had been relieved earlier; one watch company was left overnight.

No fireman was injured during the operation but a policeman was treated on the scene for foreign matter in one eye.

John Solkowski's body was found in the vicinity of the pulverizing machine and removed from the building. He was pronounced dead by Doctor Edmound Utkewicz, fire department physician. None of the remaining 12 employees was injured although one, who was on the fourth floor of the building at the time of the explosion, was rescued by Ladder 2 which extended its aerial to reach him.

Twenty persons living in the tenements received cuts and bruises or were treated for shock. One young girl was knocked off her bicycle while in front of a store across the street from the explosion site and narrowly missed possible death from a flying concrete slab.

Other services assist

The police emergency squad responded to the explosion on the second alarm from Box 23. The six squad members assisted the fire department in searching the buildings for casualties, raising fire lines and performing first aid. In addition, the Jersey City Medical Center ambulance responded on the same alarm; in all, three ambulances were required to remove the injured.

Linemen of the Public Service Corporation and the New Jersey Telephone Company also responded at the same time and cleared the fallen lines from the streets.

The Jersey City Department of Public Works supplied manpower and heavy equipment to remove the debris from the streets which helped facilitate fire department operations.

Additional assistance was received from the Red Cross which responded with a disaster squad; twelve Civil Defense firemen who reported for duty; and the Gong Club which responded with six members and its coffee canteen.

Destruction at site of explosion showing remains (pedestal) believed to be machine operated by victim. Unburned stock shown includes gum arabic and senna. All cleaner compound in this area was destroyed—*Photo by Captain Lawrence C. Connin, Jersey City, F. D.*

Investigations begun

Immediately following the emergency several official agencies began investigating the circumstances of the explosion. Director William V. McLaughlin of the Jersey City Department of Public Safety headed the city's official team. He was joined by Fire Chief Maloney who voluntarily returned from vacation; Dr. Anthony Totora, chemist of the Bureau of Combustibles; David Werther, City Law Department and the Jersey City Police. Chief Maloney also requested assistance from the National Board of Fire Underwriters.

The New Jersey Department of Labor and Industry began investigations as well as Mr. Julius Cantor, Prosecutor's Office, Hudson County. A State Board of Inquiry reported that the explosion stemmed from the mixing of the allegedly dangerous chimney cleaner. According to S. Charles Rothman, chairman of the investigating board, John W. Brampton, president of the Gregory Corporation testified in a hearing that he did not know potassium nitrate in the cleaner is a highly explosive chemical under certain conditions. According to the board, Brampton said he had asked the president of the firm, for whom the chemical was being mixed, if the cleaner contained dangerous ingredients and was assured it did not.

Properties of the product

The chimney cleaning compound was prepared by mixing 4,000 pounds of potassium nitrate, 1,000 pounds of charcoal, 250 pounds of sulfur and 100 pounds of carbonates as an anti-caking agent. This formula resulted in a product which is very similar to the military specifications for black powder.

Dr. Totora made a quantitative analysis which showed the following: Potassium nitrate 69.47 per cent; carbon 21.26 per cent; sulfur 5.04 per cent; calcium and magnesium carbonate 2.89 per cent and moisture 1.34 per cent.

In the manufacturing process the various ingredients were shipped by truck to the Gregory Corporation. These were ground into powder on the fourth floor of the building and taken to the first floor where all were mixed in a large machine.

Normally it would then be loaded in drums for shipment by truck to the packager. Because of lumps it was decided to take the product to the third floor for a final pulverizing where the explosion occurred.

Repercussions far-reaching

Through information resulting from the investigation following the incident at the Gregory plant, it was disclosed that the bulk finished powder was being shipped to a number of distributing concerns where it was in turn packaged and resold, chiefly to hardware dealers, plumbers and plumbing supply houses.

It was also disclosed—not without some raising of eyebrows—that the highly flammable product in bulk shipments, was being trucked through New York-New Jersey tunnels and over bridges without interruption.

One of the municipal fire chiefs who took immediate steps to investigate the final packaging and distribution of the cleaner compound was A. W. Leggatt of Mount Vernon, N. Y., in whose city the cleaner was being packaged. When he was notified by the National Board that the compounds used were those directly responsible for the Gregory blast and fire, Chief Leggatt at once ordered the Mt. Vernon plant shut and notified fellow chiefs and county officials of Westchester County. The county coordinator immediately promulgated teletype and radio alarms to all fire and police departments whereupon search was instituted for the scattered packaged cleaner. Various shipments were located in White Plains, Mamaroneck, North Tarrytown, Port Chester and later, in Connecticut. The latter state took prompt action to set up an embargo against entry into the state of the product.

The resulting publicity spurred investigations and search throughout all areas where it was believed the cleaner had been distributed. Those firms or individuals who had bought and used the product, for the most part had no realization of its hazardous properties and many had not given credence to the warnings about flammability on the labels.

Unburned compound, part of over 2,000 pounds which had been stored on first floor of blasted Gregory plant, was removed to city dump and burned by explosive experts

—Photo by Captain Lawrence C. Connin, Jersey City F. D.

It is possible that certain other soot removers and chimney cleaners of perfectly safe characteristics, suffered from the adverse publicity which shrouded the running down of the guilty cleaner compound. Firemen in many areas were besieged by merchants, plumbers and householders, asking for information concerning products of all kinds used in soot removal. And the end is not yet.

Chronology of response

First alarm: 12:37 p.m.—Engines 1, 5, 6; Ladders 1, 2; Battalion 1, Deputy
Second alarm: 12:40 p.m.—Engines 2, 3, 7; Ladder 6; Water Tower 1; Turret 1; Salvage 1; Acting Chief; Police Emergency; Medical Center Ambulance
Third alarm: 12:44 p.m.—Engines 4, 9, 10; Ladder 9; Turret 3

Relocations:
Second alarm: Engines 18 to 6, 16 to 2, 14 to 7; Ladders 10 to 2, 12 to 1
Third alarm: Engine 22 to 4; Ladder 4 to 9

Simultaneous fires

During the time of the disaster several additional alarms plagued the fire department.

At 2:25 p.m. Box 232 was received and

Continued on page 1076

Association heads for 1957-58 (left to right) Chiefs G. A. Mitchell, Opelika, Ala., treasurer; A. H. Lintelman, Baytown, Tex., second vice president; R. C. Malmquist, Minneapolis, Minn., first vice president, and Donald S. Charles, Charlotte, N. C., president—*Times Picayune photo*

Record-Breaking Exhibits Spark 84th Annual International Fire Chiefs Conference

New Orleans and its notable fire department prove popular hosts to visiting fire officials and guests from near and far-away places

Conference High Points

Registration: Number registered from 42 states, all U. S. possessions and many countries, 2,104

Exhibits: One hundred ten booths and 15 outside spaces

Place of 1958 Conference: Los Angeles, Cal., September 15-18

Officers for 1958: President, Donald S. Charles, Charlotte, N. C.; First Vice President, Chief Reynold C. Malmquist, Minneapolis, Minn.; Second Vice President, Chief A. H. Lintelman, Baytown, Tex.; Treasurer, Chief G. A. Mitchell, Opelika, Ala.; Executive Secretary, Jay W. Stevens, San Francisco, Cal.; Secretary-Manager, B. Richter Townsend, New York, N. Y.

THE 84th ANNUAL CONFERENCE of the International Association of Fire Chiefs marked the sixth time that the Queen City and its illustrious fire force have been hosts to the Association. This year's gathering, like its forerunners, set new records. In actual registration, it was the second largest conference in Association history; in exhibits it marked a brilliant new high; in technical, business and entertainment programs, it measured up to tradition.

The conference opened Monday morning, September 9th, in the spacious New Orleans Municipal Auditorium with President Wayne E. Swanson, Rockford, Ill., presiding. Dr. J. D. Gray of the First Baptist Church gave the invocation after which the colors were posted and the national anthems of the United States and Canada were sung by Fire Fighter Joseph Hart, New Orleans Fire Department.

Host Chief Howard L. Dey wished the conference success and introduced Mayor de Lesseps Morrisson who officially welcomed the visitors and exhibited a color film illustrating progressive developments of the 240-year-old city.

The Mayor presented the "keys of the city" to Chief Swanson, together with a plaque of "honorary citizen" of New Orleans.

Chief Donald S. Charles, first vice president, Charlotte, N. C., responded to the address of welcome. President Swanson in his annual address reviewed the progress of the Association during the

past year. During his term of office he traveled over 60,000 miles, including a trip to Europe.

Following the president's address, Louisiana Fire Marshal John E. Coon conveyed a welcome from Governor Earl K. Long and presented Chief Swanson with a scroll of honorary citizen of Louisiana.

Chief Swanson introduced Chief George McAlpine, Oklahoma City, past president, who called all attending past presidents to the rostrum where he presented each with an engraved metal card commemorating their service to the Association. Those present were Chiefs William Brosnan, Albany, Ga., 1931; Robert Bogan, Baton Rouge, La., 1936; Ray Tiller, Waterloo, Ia., 1939; William J. Cawker, Topeka, Kans., 1949; Rudolph H. Swanson, Jamestown, N. Y., 1951; and Wayne E. Swanson, Rockford, Ill., 1956.

The solemn and impressive memorial service for the 64 deceased members of the Association during 1956-57 was conducted by the New Orleans Fire Department, its chaplain, the Reverend Joseph A. Laux, officiating; Rabbi Dr. Julian B. Feibelman, Temple Sinai, delivered the closing prayer.

At noon the fire department staged a parade of its latest apparatus before the delegates at the Municipal Auditorium.

Business begins Monday afternoon

The business session opened Monday afternoon with a report of the Training Committee headed by Robert C. Byrus, director, Fire Service Extension, University of Maryland. He said a weakness of fire instruction today is the lack of tactical training. Present training methods include fundamentals on how to use the various apparatus and equipment, but fall short of teaching when to use them. Byrus urged the Association to provide its training committee with adequate funds to enable it to study and develop such a tactical program.

William D. Rossiter, chief, Iowa State Fire Marshal Division, chairman of the Arson Committee, stressed the lack of reliable information presently available to assist the fire service in the field of arson. He recommended, among other things, that a uniform reporting method be devised by the IAFC in cooperation with the arson investigators association.

Fire Marshal William J. Scott, Toronto, Ont., reporting for the Advanced Training Committee, urged training in fire department administration along lines previously approved by the board of directors. The members present voted to authorize funds for the committee to continue its study leading to the establishment of courses designed strictly for administrative training, sponsored by the Association.

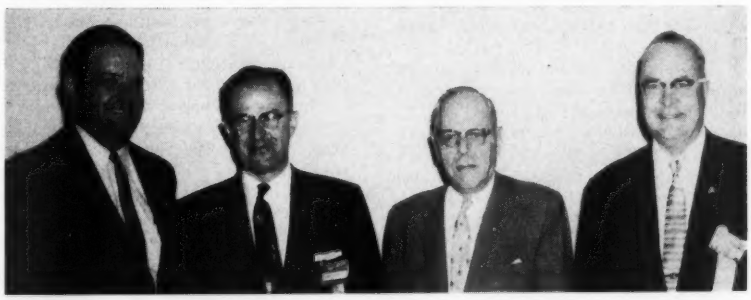
Following the report of Secretary-Manager B. Richter Townsend, Chief Donald Holbrook, Meadowood, N. H., chairman of the Volunteer Committee, spoke on the activities of his group.

Presiding officer Chief Donald S. Charles then introduced Chief Raul Gandara of Puerto Rico who in turn, presented several visiting officers from foreign lands. These included Assistant Chief Tamanasa Shimizo, Osaka, Japan; Chief Nunez Roque, Guanabaoca, Cuba; Chief Louis C. Endara and Captain Ernesto Arosemena of the Republic of Panama, and Chief Omar Brown, Virgin Islands.

The first speaker of the afternoon session was John Redmond, president, International Association of Fire Fighters who called for a reduction of working hours for firemen. George Robinson, assistant chief engineer, National Board of Fire Underwriters, next warned that fire losses may amount to more than $1 billion this year and stressed the fact that in 1956 one-tenth of one per cent of the 409,000 fires which occurred that year caused 32 per cent of the total losses suffered by this country.

Please turn page

Upper: Ladies of the conference are entertained at luncheon in the historic Court of the Two Sisters. They also toured the city and harbor, attended fashion shows and reveled in the city's interesting shops and eating places
Lower: President Wayne E. Swanson receiving scroll of honorary citizen from Louisiana Fire Marshal John E. Coon as Chief Howard L. Dey looks on —*New Orleans F. D. photo*



Fire commissioners panel put punch in the program. Chiefs learn some straight truths on administering a fire department in this day of tight budgets. Left to right are: Fire and Police Commissioner Claude Armour, Memphis; Director of Public Safety Joseph Sestric, St. Louis, Mo.; Fire Commissioner Paxton Mendelssohn, Detroit, Mich., and Chief Reynold C. Malmquist, Minneapolis, Minn., moderator—*Photo by George Beaumont*

Fire officers from foreign lands provided an international atmosphere. Here Los Angeles City Chief William Miller points out places of interest on New Orleans map to Chief Tamanasa Shimizo of Osaka, Japan—*Times-Picayune photo*

Continued from previous page

Tuesday morning the conference resumed with First Vice President Charles presiding. Executive Secretary Jay W. Stevens, chairman of the Fire Prevention Committee, delivered an inspired report on the progress of the governors' conferences on home safety which are sponsored by the Association. He reported that 23 state governors' meetings have been held to date but he counseled greater effort in the future if the death rate from fire is to be substantially lowered.

Frank L. Brannigan, safety engineer, Safety and Fire Protection Branch, United States Atomic Energy Commission, warned fire chiefs to prepare for the dangers which may face them with the ever-widening industrial uses of atomic energy.

The morning session closed with an address by Olin Culberson, chairman, Railroad Commission of Texas, and for 35 years secretary-treasurer of the Texas Firemen's and Fire Marshal's Association, who spoke for the volunteers of the service.

Attitude toward church fires

The afternoon session opened with an outstanding paper delivered by Chief Leo G. Driscoll, Boston, on the subject "What Should We Do about Church Fires?" He warned his listeners to adopt a realistic attitude on the subject and not to soften their demands for fire safety in deference to the clergy. "Treat churches like any other occupancy," he urged.

"What the Boy Scouts Mean to the Fire Service" was the title of a paper delivered by Chief Albert E. Kimball of Hingham, Mass. He was followed by Chief Harold J. Burke (ret.) New York, who demonstrated and described the latest type fire detection system actuated by nuclear energy.

The afternoon session closed with a lively panel discussion on what fire chiefs believe is needed in the improvement of fire apparatus design. Chief Roi B. Woolley, editor of FIRE ENGINEERING, as moderator, presided over a panel consisting of Chief Edward MacDonald, White Plains, N. Y.; Chief Dan Vogel, Cincinnati; and Chief Edward Wischer, Milwaukee. The discussion, in which the audience participated with enthusiasm, elicited a number of constructive ideas.

That evening saw the Fire Chiefs' Ball and Floor Show in the auditorium where the guests were entertained by a top flight professional cast headlined by Candy Candido, a Walt Disney star and native of New Orleans. Dancing followed.

Wednesday morning's session, with Second Vice President Reynold C. Malmquist in the chair, opened with Fire Marshal William J. Scott of Ontario reporting on "What a Special Study of Fire and Police Integration Revealed." Scott told his listeners no single proposal has posed such a threat to the fire service in the last 20 years as that of merging fire and law-and-order forces.

W. Thomas Schaardt, a specialist in fire station architecture, reviewed the essentials of modern fire station design and construction. Fire stations, no less than all other types of buildings, are being streamlined, he maintained.

Speaking for the Committee on Communications of the IAFC, its chairman, Chief Joseph Giammatteo of Glen Echo, Md., reported his group's unanimous opposition to the proposed single radio frequency for all municipal services, FCC hearings on which were recently held.

Another high point of the conference was the panel discussion titled "As the Fire Commissioner Sees the Fire Service." If the fire fighter thinks he has troubles he should listen to those recounted by Commissioners Claude Armour of Memphis; Paxton Mendelssohn of Detroit and Public Safety Director Joseph Sestric of St. Louis. Commissioner Armour made the point that the fire service should do away with many of the antiquated ideas and traditions that have been handicapping the service. He also counseled the chiefs to promote in every possible way for professional recognition.

Director Sestric withheld no punches in pointing out to the chiefs some of their shortcomings. ". . . Administratively, our fire departments are in a rut," he said, "and everybody knows that the only difference between a rut and a grave is length and breadth." He recommended that the fire service begin now to remedy this weakness and assume its administrative as well as fire fighting responsibilities.

Commissioner Mendelssohn reviewed his philosophy as an administrative head of a department and pointed out that he has the authority to give direct fire fighting orders to the chief of department. During his services as commissioner he stated he has never used this authority, but depended entirely on the wisdom and experience of his professional commanders.

Lintelman second vice president

The results of the contest for the post of second vice president were announced after conclusion of the panel. Chief A. H. Lintelman of Baytown, Tex., was elected.

Rain squalls failed to dampen the enthusiasm of the delegates and their wives for their afternoon's excursion aboard the big river steamer *President*. The entire New Orleans waterfront was reviewed, the delegates getting a good understanding of the vast shipping fa-

Those responsible for planning the New Orleans conference. Left to right are I. H. Case, FIRE ENGINEERING, member of Program Committee; Chief Newton L. Wheeler, Miami, Fla, chairman, Program Committee; Chief Wayne Swanson, Rockford, Ill., president, IAFC; Host Chief Howard L. Dey, New Orleans, and Chief Raul Gandara, Fire Service of Puerto Rico, member, Program Committee—*New Orleans F. D. photo*

Group of Eastern Division delegates. In the front row may be seen Chiefs Louis Zimmer, Maplewood, N. J., president (second from left); Edward J. MacDonald, White Plains, N. Y., first vice president (third from left) and Chief Edward Clark, Wayne, Pa., secretary (fourth from right). Members met informally in New Orleans Auditorium following Tuesday business session—*New Orleans F. D. photo*

cilities and attendant fire hazards, and how New Orleans fire fighters cope with them.

The toastmaster at the banquet held that evening, was Charles Price of the New Orleans office of the National Board of Fire Underwriters. The guest speaker was Justin Wilson, safety consultant, Baton Rouge, La., who beguiled his audience with many humorous stories of the "Cajuns" of fact and fiction. Retiring President Swanson introduced the official "family" for the coming year after which the officers were duly sworn. President Charles presented Chief Swanson with the ritualistic past president's diamond ring; the outgoing president also was the recipient of a beautiful down comforter, made by Mrs. Clyde Canning, wife of the enterprising head of the Exhibitis Committee.

Many resolutions approved

The conference concluded Thursday with business sessions, during which members acted on twelve resolutions:

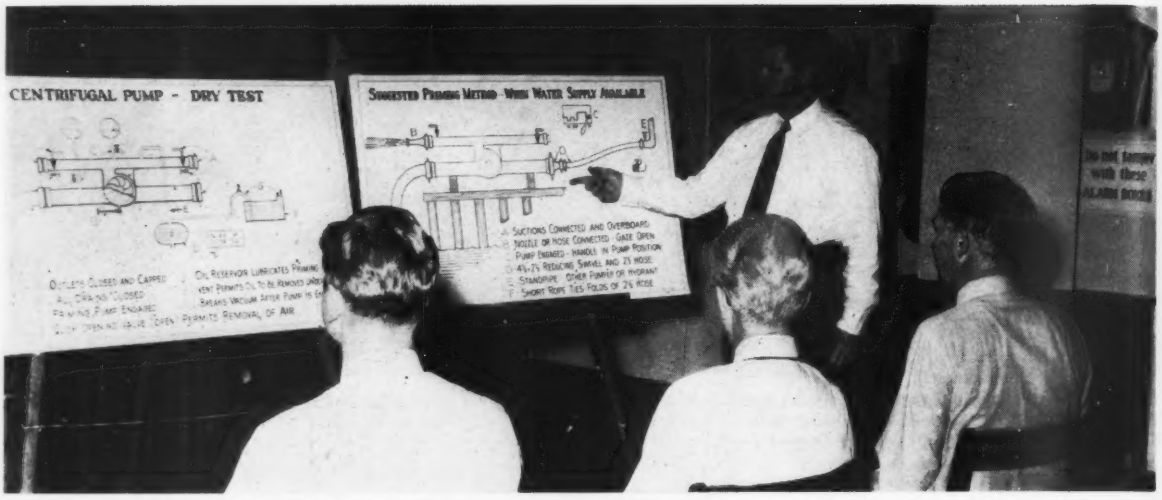
1. Opposing integration of fire and police services (approved)
2. Requesting greater representation of fire chiefs on the standards committee of the National Fire Protection Association (referred to IAFC Executive Committee for action)
3. Supporting the "Keep America Beautiful" anti-litter drive (approved)
4. Supporting the 1957 Muscular Distrophy campaign (approved)
5. Requesting commercial broadcast stations to withhold broadcasting of news of disasters for at least 15 minutes after they receive notice (approved)
6. Complimenting the National Board of Fire Underwriters for its cooperation (approved)
7. Expressing appreciation of the training program on radiation hazards organized and conducted by the Atomic Energy Commission (approved)
8. Recommending the marking of homes containing invalids with a suitable symbol to facilitate identification of such places and removal of patients (approved and referred to Board of Directors to prepare symbol)
9. Deploring deaths by fire of children and commending the Hartford Fire Insurance Company's Junior Fire Marshal safety program (approved)
10. Requesting the Federal Civil Defense

Continued on page 1077

TOP: Advanced Training Committee in session at New Orleans conference. Left to right (seated) are: Dr. John Gerletti, University of Southern California; Chief Howard L. Dey, New Orleans; Fire Marshal William Scott, Ontario; President Wayne Swanson; Chief William Miller, Los Angeles. Standing (left to right) are: Dr. James Kreuzer, Queens College, New York City; Dr. Leonard Silvern, Hughes Aircraft Corp., and Chief Keith Klinger, Los Angeles County

CENTER: Boy Scout Committee meets during conference. Chief Albert Kimball, Hingham, Mass., chairman, reported on the committee's efforts in paper delivered at business session

BOTTOM: Philosophy of saving children's lives by fire prevention campaigner Jay W. Stevens, San Francisco, executive secretary, IAFC (right) is shared with veteran Chief A. J. Cote (retired), Woonsocket, R. I., oldest chief at the conference; Frank Brannigan, Atomic Energy Commission, and Roi Woolley, editor, FIRE ENGINEERING—*New Orleans F. D. photos*



Staff officers of unit serve as instructors in the two schools conducted for new lieutenants and captains. Captain Thomas Ryan explains emergency method of priming a pumper under normal conditions in session devoted to care and operation of apparatus

Specialization Keynotes Operations of Supervising Engineer Units

A detailed analysis and description of the duties and operations of New York's Supervising Engineer Company No. 1

By CAPTAIN THOMAS D. RYAN

Supervising Engineer, New York Fire Department

In Part I, Captain Ryan explained the organization and background of the New York Fire Department's Supervising Engineer Company No. 1, and listed some of the many diversified applications of its cumulative talents, such as in the testing and operation of fire apparatus, use of sprinkler systems, dewatering, and miscellaneous tasks. In this concluding article, he takes his readers further into the duties and responsibilities of this highly essential entity.

OFFICER PERSONNEL of the supervising engineer unit not only are associated with three of the schools of the fire college but conduct an extensive field training program, as well.

Until recently unit officers were assigned as the only instructors in the motor and pump operators' school, which trains members of the rank of fireman in the theory, operation and preventive maintenance of department apparatus. Some few years back, the course of instruction was standardized by the staff, printed material prepared on the content of each lecture, many new visual aids introduced and, after extensive research, particular stress placed on the then comparatively new area of driving training.

Considerable investigation was undertaken in this connection, resulting in the setting up of the present driver training program and the assistance of representatives from such organizations as the American Automobile Association, the Association of Casualty and Surety Companies and other similar agencies. Another innovation was the purchase and use of psychophysical testing devices in candidate selection. It is noteworthy that this program was selected by the New York State Division of Safety as a template for its Fire Instructors' Conference at Elmira in 1956 and a member of the unit invited to cover this topic and set up a model Road-e-o for them. (Full details of this program are contained in an article by Captain Ryan in the September, October and November 1955 issues of FIRE ENGINEERING.—Editor)

Due to the heavy work load and activities in other fields, unit officers no longer serve regularly as instructors in this school. Instead, a fire college instructor, indoctrinated by members of the unit, is assigned to this duty on a full-time basis. Except in unusual cases, the staff acts only in the capacity of consultants.

Officers' schools

There are two schools of the fire college wherein newly appointed men to the ranks of lieutenant and captain are indoctrinated. Among the topics covered in both schools is that of the "Care and Operation of Apparatus and Equipment." In such sessions, conducted by supervising engineer staff members, officers are enabled to bring to light many of the questions and problems which arise on this subject at company levels. Moreover, captains are sometimes faced with the problems of an acting battalion chief and are appreciative of an opportunity to discuss the use of all types of equipment from this higher level. In addition, the use of newer or unusual apparatus or equipment is discussed and demonstrated, employing either the actual piece or training aids on it.

Classroom sessions dealing with theory are followed by actual demonstrations.

For example, the information disseminated in class on the theory of dry testing of pumpers, priming from an outside source and relaying operations, is substantiated by actual field demonstrations, using apparatus, the various devices and discharging water.

On-the-job training

As a natural follow-up to the teachings of the fire college, and in order to vitalize such information, the unit carries on a systematic and continuing field training program at company, battalion and division levels. Through this medium it has been found that all instruction on the subject of apparatus, equipment and fire ground operations is crystallized and the ideal situation created for the elimination of most of the limitations and shortcomings of classroom instruction. Because of the many types and makes of apparatus in present service, it is usually only possible to teach fundamentals in the classroom sessions at the fire college. Its main benefit is that it provides an excellent groundwork for field instruction and testing of personnel, which is, in the final analysis, the true criterion of the effectiveness of the teaching of a practical operation.

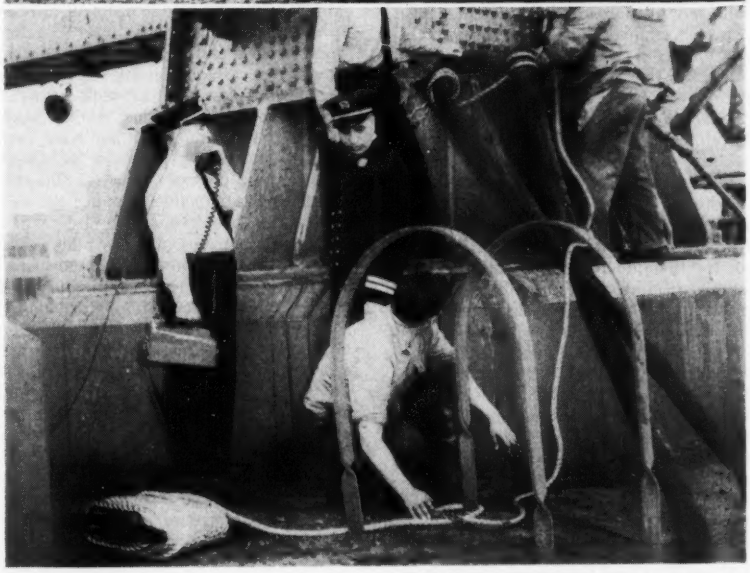
With the unit in service by radio, companies are visited in sequence during their outdoor drill periods and the entire personnel given a thorough review on the piece of equipment in service. Similarly, in rotation or at the request of chief officers, visits are made to battalion and division drills and a like service performed. Besides familiarizing chief officers and company personnel with apparatus under their command, this practice serves as an excellent means of familiarizing members with the equipment of nearby companies. All are in agreement that they may be called upon to operate these pieces under unusual conditions, such as an interchange of personnel, injuries to members or other emergency situations.

Through supervision of such cooperative drills, employing both arms of the service, misimpressions, in some cases of long standing, are brought to light and clarified. Besides serving as a regular test of the apparatus, such visits can determine the standards of maintenance kept in each company. In addition, various accessories, such as relief valves, governors, stage valves, air braking systems and other controls are tested and reports forwarded to the Division of Repairs and Transportation, when necessary.

It has been found that these visits provide an excellent opportunity for driver checking and instruction, with particular emphasis on proper shifting habits. Since accentuating this topic, it has been noticed by the shop staff that there has been a decrease in the number of clutch and transmission repairs. Moreover, a test of the vehicle's braking efficiency can be made at company drills, employing a detonator device, and defects, if any, noted and corrective measures initiated.

Many times during the course of the year it becomes expedient to provide

Supervising tests. Under protection of fog applicator, fire crew extinguishes ground fire, using foam stream, then moves in with fog to kill fire in vehicle. Note reversed helmets as protection against radiated heat



Dry standpipe lines on bridges connecting Manhattan and Brooklyn are periodically subjected to test. System is fed at anchorage by two 3½-inch lines from fireboat. In upper photo Lieutenant George Durr is taking flow reading at highest point on bridge roadway

spare apparatus to a company or to reassign a piece of equipment on a permanent basis. In such instances, visits to the companies are made and personnel given instruction until all of the working groups have been covered before it is actually placed in service.

As a final note under this topic, our office is always open and its library available to any member of the department who seeks information on a piece of equipment or any other topic in the extensive field this unit embraces.

Testing, Experimental and Research Programs

New apparatus and equipment

In cooperation with the chief in charge of the division of fire fighting equipment, members of the unit field test each type of new equipment on apparatus before selection is made. As a recent example, three manufacturers of deluge sets submitted their products for testing, prior to selection of one type for installation on 44 pumpers the department has on order. First, detailed tests were individually run on each deluge set and its friction losses determined at various nozzle sizes and pressures. Its reaction at various angles to the ground and to the side were also determined. Before a final selection was made, a simultaneous test was conducted before department officials, so that the continuity and reach of the streams could be observed under the same operating conditions. Because of the enormous quantity of water required to supply three deluge sets at once, the services of the department's newest fireboat was utilized.

Upon delivery of each new piece of apparatus, members of the unit cooperate with the division of repairs and transportation in conducting acceptance tests. This may entail supervising a pumper's test at draft or operation of a ladder, followed by a road and brake test over a predetermined course. In line with this last item, a plan is being evaluated whereby the use of the former road course covering several miles of city streets, with its attendant hazards, could be eliminated and complete information secured on a marked-off parking area of a few hundred feet.

Although all of the instruction on new apparatus has actually been given heretofore by officers of the unit, cooperation of the manufacturers has always been sought on the preparation of printed and other information on their product. In this fashion not only is agreement reached on all points, but suitable means may be employed to enable the staff to conduct their instructional sessions more effectively. To avoid the shortcomings of the past, liaison is maintained with the manufacturers of new equipment, so that their operators and maintenance manuals, when provided, will be pointed to the needs of our members.

Laboratory and field investigation

Members of the unit are continually on the alert in their efforts to keep abreast of new developments of manufacturers or of men in the department, whether they belong to the unit or not. Actual devices, suggested field operations and modifications of equipment, submitted by any man in the department, are studied and evaluated for possible adoption.

Explanations precede demonstrations. Lieutenant Thomas Clements of the NYFD Supervising Engineer Unit uses chart to show working parts of clutch and transmission before checking member's driving and shifting techniques in field training program

Among these items are the following:

1. The installation of safety belts on all apparatus for chauffeurs, tillermen and occupants of fire apparatus. This idea has been applied to all present and future apparatus, after cooperative effort with the Ford Motor Company and Cornell Institute.

2. A "relay dump valve,"* a device placed on the lead pumper, has practically solved the greatest problem in relay operations, i.e. that of hose bursting when a line is shut down. Experience has shown that a considerable build-up of pressure is inevitable in such instances because governors are slow in their operation and relief valves either have their settings altered by changes in intake pressures, or do not have a sufficiently low setting to effectively control the situation, when several pumpers are used.

The original idea and the pilot model have been made into a standard item by one of the largest manufacturers of relief valves. Specifications for the 44 new pumpers on order and all pumpers of the future will include this item, either as a separate device, or a modification of the regular relief valve so that it may discharge externally to the ground for our relay operations.

Besides the new pumpers, these devices have been allotted to companies near large airports and areas where relaying operations are a frequent occurrence.

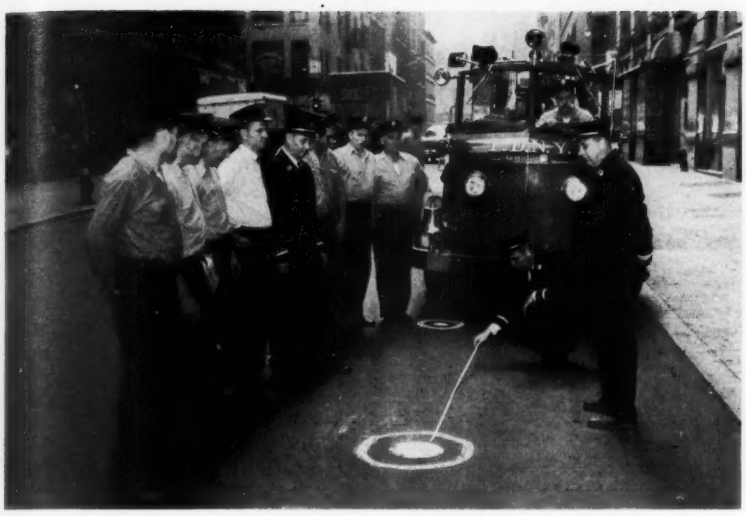
3. A small nozzle adapter (which is really an adapter within an adapter, to fit the threads of the barrels of all types of nozzles) is easily carried in the pocket and facilitates many operations, without shutting down the source of supply with consequent loss of time, particularly when many lines are in operation.

4. A new version of a priming device, employing an air venturi, has been developed and successfully primed a pumper in one-half the time it took a rotary gear priming pump to do the same job. Besides the economical factor entailed in the installation of a priming pump, such a device eliminates a unit which can and does go out of order and cause difficulties at fires. The pilot model was supplied by our air compressor unit with large tanks installed on it; the problem of supply still remains with us as we are aiming at the use of the air from the pumper's air brake system. Specifications for new pumpers permit the manufacturers to install an air venturi or a rotary gear priming pump, push-button type.

5. Foam supply to a height. Field experiments, which were published in a fire college bulletin, were put to a practical test at a recent lacquer fire in the upper stories of a building on Spruce Street. These field tests proved a point unverified up to that time, in that chemical foam was effectively supplied to a height of 70 feet, discharging through a portable pipe on a metal aerial. At the actual fire a water stream from the portable pipe on the fly ladder of an aerial truck prevented spread of the fire on the upper floor of the fire building, while it was extinguished on the floor below in the lacquer by foam discharge from a pipe mounted on the bed ladder.

Similarly, to help in the solution of one of the problems which has arisen in the installation of foam equipment below deck on new fireboats, field tests have verified the practicality of drafting mechanical foam and discharging it to a yet

* See FIRE ENGINEERING, October, 1954 "Short Cuts and Gadgets."



Detonator device (on bumper) serves as indication of vehicle's braking efficiency, as well as excellent training aid. Lieutenant Clements interprets for company personnel the distance between marks made on ground by vehicle coming to an emergency stop

undetermined height. Because of operating difficulties, tests were discontinued before its maximum height could be ascertained.

The proper usage and limitations of booster lines to effectively supply combination pick-up and aspirator nozzles have also been determined by field tests and the results published.

6. Use of large size fog nozzles. Several types from various manufacturers are carried, when responding to fires, and are used, wherever possible, in order to properly evaluate the usage and the product itself. Incidents and results are correlated in order to arrive at well substantiated conclusions.

7. Priming defective pumpers. It has been conclusively shown, using a method devised by one of the unit's former members, that a pumper with a defective priming pump or a sizeable leak on its discharge side can be effectively primed, using limited water supplies from its booster tank or an outside source (hydrant, standpipe or line from another pumper).

8. Eductors. For many years all dewatering operations, made necessary by burst water mains, prolonged application of streams on a fire or other unusual conditions, were initiated and supervised by the unit. Last year, following experimental work with several pilot models, a lightweight, all-purpose, aluminum eductor was devised. Its wooden template was cast by an outside firm and then machined by the shops at a considerable saving. A total of 30 of these time-saving aids were distributed throughout the department and have since shown the wisdom of this move by enabling each division chief to initiate his own operations without awaiting the arrival of the emergency utility unit, which is now used for larger operations only. Because investigation unearthed no printed information on the practical usage of eductors, an article was compiled on this topic, by pooling the many experiences of our members and conducting tests at the probationary firemen's school. Published in the department magazine, *W N Y F*, the treatise has received considerable and favorable notice not only from manufacturers of eductors but from others in the fire service, as well.

9. Current investigations. Among the many field operational matters at present under consideration by the unit are: a) A method of testing a pumper for internal leaks not detectable by dry testing, by supplying it from a positive source of limited capacity and accelerating the motor so that the fire pumps start to "run away" from the water and develop vacuum; b) a swing check device to be placed between the suction line and the suction inlet to further improve the method of priming defective pumpers as explained in item No. 7; c) the uses of hydraulic or air controls for portable pipes on aerial trucks; d) the feasibility and limitations of soft suction connections in hydrant operations; e) the restoration of an indoor set-up for instruction on and testing of pumpers, in an atmosphere in which, regardless of the time of the year, the students are comfortable and the situation is conducive to learning.

Up to the present writing there have been hundreds of ideas, suggestions and devices which have been tried out in field tests by the unit, some of them having a definite bearing on improved operations. The claims of manufacturers are also investigated, not that their statements are doubted, but simply because it is realized that "trying it out" is one of the most effective means of self-education.

Special duties

In addition to all the foregoing, the supervising engineer unit is charged with several other responsibilities, some on a regular and some on an irregular basis. Among these duties are found:

Bulk Oil Storage Plants. There are hundreds of such establishments in the City which require tests of their fire extinguishing systems on a periodical basis or every time a new tank is added to the plant installation. A member of the supervising engineer unit must be present at each test of the system, before approval and issuance of a permit by our division of fire prevention. The entire plant is first inspected and its standards of housekeeping observed; later its extinguishing system and, in foam type protection, its supplies examined for sufficient quantities and evidences of deterioration. The usual test on such systems consists in breaking a joint in the piping of the system at the farthest point from the supply and noting the time necessary for discharging foam of a proper consistency.

On carbon dioxide protected systems the tanks, cylinders and manifolds are first examined for conformity with existing regulations, before a battery of one or more cylinders is discharged to prove the efficiency of the system. Similar plants, with other types of protective systems, are tested for conformity with existing regulations on the particular type of extinguishing agent.

Bridges. Upon the staff of the supervising engineers formerly rested the duty of making systematic fire prevention inspections on the following bridges: Brooklyn, Williamsburg, Manhattan, Queensboro, Wards Island Footbridge, Tri-Boro and Bronx-Whitestone, the first four of which are equipped with standpipes. Such inspections included fire alarm boxes on the bridge proper, as well as its approaches, in addition to checking on the number and type of portable fire extinguishers and the condition of the standpipe outlets and valves.

Periodically, hydrostatic and flow tests are conducted by Supervising Engineer No. 1 on the bridge standpipes in order to determine their condition and readiness for use. Defects noted in these inspections and tests are forwarded to our division of fire prevention for corrective action.

Board of Inquiry. The officer on duty in the unit serves on the board which is charged with the investigation of accidents involving department apparatus. At the board meeting the chauffeurs, tillermen and the company officers on duty at the time of the accident are interrogated, with an eye towards fixing responsibiity and avoiding a recurrence in the future. The officer of the supervising engineer unit serves as a valuable asset on this board because of his familiarity with each piece of apparatus and his recognition of its idiosyncrasies.

Following the hearing, all personnel involved are given the psychophysical tests, which were originally introduced in the department a few years ago, when standardizing the course of instruction in the motor and pump operators' school.

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"Piggyback" trainload of New Haven County area fire apparatus ready for departure from New Haven R. R. yard. Special flat cars are equipped with connecting "bridges" to facilitate loading and unloading; fire crews are carried in coaches at end of train

Fire Fighters Go "Piggyback" in Submarine Base Mobilization

New technique of response by rail feature of Connecticut State Civil Defense test

MORE THAN 3,000 CIVIL DEFENSE workers, over half of them firemen, converged on the U. S. Submarine Base at Groton, Conn., Sunday, May 29, in a test of the mobility of emergency services in an emergency such as might strike any target area in the event of enemy attack, or such as might be required to meet holocausts like those which visited the west coast and more recently, the New England states.

The eastern half of the State of Connecticut was the scene of great activity as the various CD services were called upon to function in their respective fields at numerous minor, local incidents—most of them fires of one type or another—and one a simulated major conflagration. That the fire forces which were called into action provided the dramatic overtones which "stole the show" is no discredit to the other CD services, all of which accredited themselves with plenty of glory.

This account is concerned with the fire control and extinguishing activities which ranged from fighting a simple scrap fire, to one representing a major conflagration necessitating the mobilization of numerous fire units drawn from a wide area.

At the conclusion of the scheduled minor local events which nevertheless engaged scores of fire units throughout the eastern part of the state, practically all of these and other units rendezvoused at the Submarine Base at New London, where they lined up on the waterfront for mass pumping exercises. This detail of the test exercises was known as "Operation Submarine Base." Under the watchful eyes of civil, military and Civil Defense officials from Connecticut, Massachusetts and New Hampshire, the fire forces, teamed with radiological monitoring and mass feeding details, went through their paces.

At the Base, 130 pieces of fire equipment from over 105 fire departments of Connecticut and other states pumped from the Thames River to supply one hundred and five 2½-inch hose streams to form a water curtain approximately a mile long. Some of these units teamed to relay water from Riverside Park in New London to the Base, a distance of approximately two miles. At Groton, 15 pumpers relayed water from the Gold Star Memorial Bridge to the Submarine Base.

New Haven goes "piggyback"

Fifteen units of fire apparatus from New Haven, West Haven, Orange, East Haven, Branford, North Haven, Ansonia, Middlebury, Woodbury, Cheshire, Bethany, Hamden and Milford, all in the New Haven County area, were dispatched from the City of New Haven to the New London yards of the New York, New Haven & Hartford Railroad by piggyback train. This is said to mark the first such large-scale movement of fire apparatus by rail. The test was undertaken to determine whether or not such mass movement is possible in meeting disasters and if so, just what details of dispatching, loading, unloading and so forth, must be considered in the operation.

"Piggyback," as it is termed in railroad circles, is nothing new to most of the railroads of the country which have adopted this method to better meet highway truck competition. Essentially, it consists of loading the trucks and transports of whatever nature on special flat cars, properly anchoring them, transporting them as part of normal freight trains, and discharging them from the conveyances at a predetermined spot by means of permanent or temporary ramps or loading platforms.

Forces which made up the rail convoy from New Haven County assembled in the New Haven Railroad yard at the foot of Brewery Street, New Haven, where the vehicles were loaded by way of ramps aboard the 15 and more freight cars. The crews of the various fire companies

Railroad workmen secure apparatus to flat cars prior to departure. Test was held to determine possible large-scale disaster use

Sub Base sailors and firemen place plank ramps in position prior to unloading. Apparatus was driven off entire train progressively, over connecting "bridges" between flat cars without mishap. Operations were conducted by land, sea and air during maneuvers

were carried in two coaches tied into the train. A regulation caboose containing train crewmen tailed along behind.

Special freight cars

As rapidly as the fire department pumpers and rescue rigs were mounted piggyback, they were securely fastened by the train crew. The freight cars used in the operation are so constructed that connecting ramps may be let down between cars to permit unloading of the vehicles progressively one after another, until the rearmost one of the convoy clears the forward ramp to the ground. The unloading ramp used in the test was constructed of timbers by the members of the Base with the help of railroaders.

The entire operation of loading, travel and unloading was accomplished without mishap. The train, hauled by regulation diesels, covered the 50 miles between New Haven and New London within an hour's running time, notwithstanding the fact that there was a continued drizzle of rain.

It was the opinion of observers, as well as firemen who made the trip, that such piggyback transportation would be entirely practical in the event road and highway conditions leading to the scene of an emergency made normal highway travel impossible.

Important considerations

Two important factors should be borne in mind in the event of piggyback rail emergency transportation. The first is the matter of loading facilities. Not every community along the railroad has loading platforms or ramps sufficiently strong to permit such loading or unloading. Nor are there timbers or other means of improvising satisfactory loading ramps immediately available in all communities where fire forces might be called upon to load or unload.

The second question that should be predetermined before such transportation is undertaken is the ability of the loaded apparatus to safely pass under the numerous highway and other bridges encountered along the average railroad right-of-way. Some modern fire apparatus with high cabs can only barely clear the overhead passes—others which mount lights or master stream devices on top of cabs or elsewhere may be unsuited for such safe movement.

In this connection, the fire forces of Westchester County, N. Y., during World War II prepared elaborate plans for moving its fire units into New York City (or elsewhere) by means of the two major railroad lines leading into that city. The initial survey made by the Fire Chiefs Emergency Plan with the cooperation of the New York Central and New York, New Haven & Hartford Railroads, disclosed the fact that certain apparatus in the county could not safely pass under all of the overhead bridges. Nor could all the railroads' freight-loading platforms and ramps be used because of their inability to withstand the weight of the fully loaded apparatus.

The facts, once analyzed, resulted in reshuffling of apparatus assignments for New York City. It also led to some improvements along the railroads' right-of-way. Also, the freight cars now used for piggyback emergency transportation are improvements over the old flat cars and gondolas which it was formerly believed, were the only kinds available to transport fire apparatus. Although today it is a pretty safe conclusion that no insurmountable difficulties of clearance or loading facilities will be encountered, chiefs who have studied the matter report it would be well for those fire officials who may be interested in the possibilities of piggyback emergency transpor-

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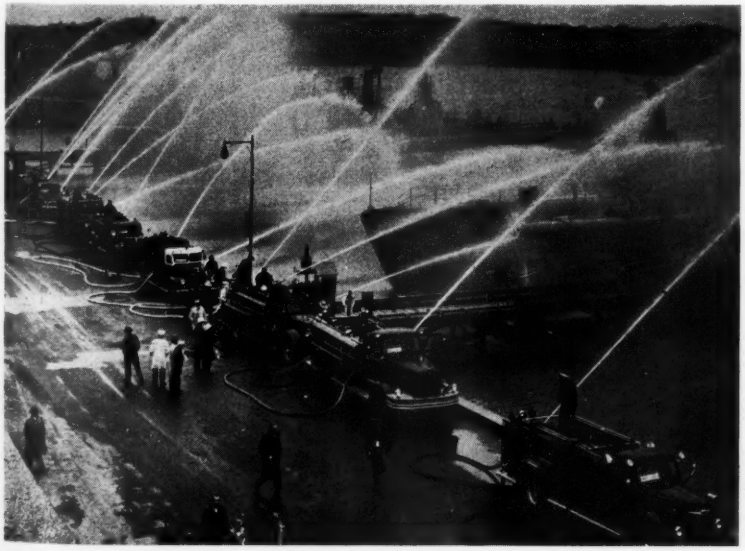

Part of piggyback convoy in operation on the water front at the U. S. Navy's New London Sub Base. Over 100 fire companies from eastern Connecticut took part in the tests

THE COVER STORY

Closeup of operations showing plant and municipal firemen surrounding dangerous blaze caused by rupture of 6-inch line carrying ethyl benzene at high pressures. At height of engagement over 40,000 gpm were being discharged on fire and exposures. Foam was also used. Note use of shields

Niagara of Fire Streams Confines Threatening Fire at Big Koppers' Kobuta Plant

AN EXPLOSION AND FIRE in the huge Kobuta plant of the Koppers Company near Monaca, Pa., on September 12 reportedly rocked homes and factories throughout the Beaver Valley district, causing heavy property damage.

Despite the severity of the blast and hot fire which followed, none of the 1,100 workers in the big chemical plant was injured. Nor were there any serious injuries among the plant's fire fighters, or the 300 and more volunteer firemen, who responded to the emergency from a dozen neighboring fire departments.

The Kobuta installation, acquired from the government some years ago, prior to which it was engaged in making artificial rubber, produces a number of chemical products, the chief one being styrene, basic substance used in making rigid plastic. Another product, polystyrene turned out for purely research purposes in another part of the plant, is used in making flexible plastic.

The explosion and fire centered in a tower-like heat exchanger located on top of a one-story brick hydro-pump room. This is a unit designed to keep down the temperature of chemicals used to make highly flammable ethyl benzol. This site is in the center of the plant adjacent to the power building which supplies the whole operation. It was reported that the cause of the initial blast was the rupture of a 6-inch line which carried ethyl benzene at elevated temperatures and very high pressures.

The fire itself, according to James Howard, assistant plant manager and Chief George Prince, who heads the plant fire brigade, was confined to a small area of only about 150 square feet, a fraction of the 275 acres covered by the installation. However, because of the serious nature of the exposures on every side, large quantities of water were necessitated. At the height of the action, as shown in the cover and accompanying illustrations, over 40 heavy fire streams were operated on the fire and exposures.

The blast shot flames 100 feet into the air, the concussion knocking down a score of workers in the immediate area. Only six of these were in the actual explosion zone and all escaped serious injury although they had narrow escapes.

Prompt action by plant firemen, who grabbed hose lines (available on every hand) and directed streams upon three nearby 80-foot tanks containing ethyl benzene, prevented possible further explosions which might have wrecked a large portion of the plant.

The threat of such eventuality resulted in the calling of fire forces from more than a dozen Valley communities. Firemen from Monaca, Aliquippa, Beaver, New Brighton, Rochester, North Rochester, Raccoon Center and Potter, together with Hopewell, Center, Patterson, White and Pulaski Township forces responded with more than 25 pieces of apparatus, ten ambulances and approximately 300 firemen, all under the organized disaster plan in effect in the Valley area. The Aliquippa Fire Department, and the brigade of the Ashland Oil Company dispatched foam to the scene—not all of which was needed. Fire equipment from

Continued on page 1065

One of the four West Orange stations linked with headquarters by the new paging system is Saint Cloud No. 3. Opened in February 1957, it houses two pieces of apparatus and four men

Watch room at Fire Station No. 3 is equipped with radio, box telegraph tape machine and microphone for inter-station paging system. A second microphone is located in the captain's quarters

Sound System Links West Orange Stations

FIRE SERVICE OFFICIALS have long looked upon modern communications as vital factor in safeguarding life and property from fire. They have been quick to accept new communications developments as they were introduced.

An essential requisite in an efficient fire department is quick, accurate communications between fire stations and their firemen, as well as an effective fire alarm system. Recently West Orange, N. J., installed an interstation paging system which dramatically demonstrates how essential to fire fighters such a facility may prove.

The system links West Orange Fire Headquarters with its four fire stations and police headquarters.

The interstation paging system employs two microphones in each of the four fire stations, one in the control room of each building and one in the captain's quarters. A "press-to-talk" switch on each microphone stand automatically connects the instrument to an amplifier, actuating a relay which connects the power amplifier output to a 70-volt line feeding the paging speakers in all four stations. When the switch is released, the relay opens the output of the local station power amplifier ahead of the local station's speakers.

Has safety feature

In the design of the paging system circuits have been simplified and held to a minimum. To minimize the possibility of failure, a local amplifier system was installed in each of the four fire stations, with sufficient power to feed all speakers in both remote and local situations. Thus, in the event of amplifier failure, transmission is interrupted from only one building. Moreover, the particular fire station involved will continue to receive signals from any of the other remotely located stations.

Single line distances from Fire Station No. 1 to the remote locations are as follows: Police headquarters, 2,000 feet; Fire Station No. 2, 6,000 feet; Fire Station No. 3, 16,000 feet; Fire Station No. 4, 22,000 feet. The distances involved do not materially affect 70-volt line transmission.

The use of this communications linkup

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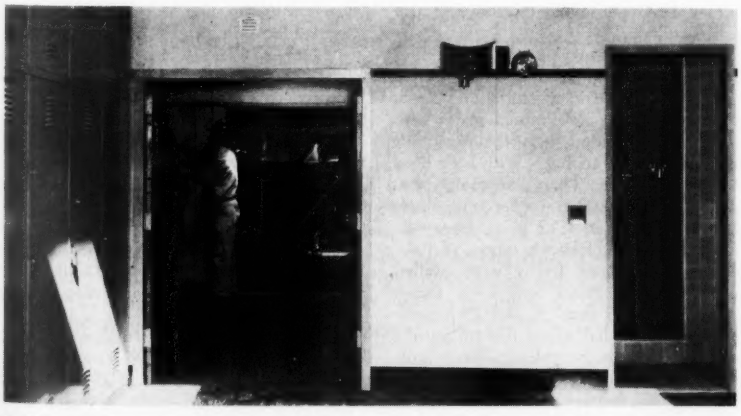
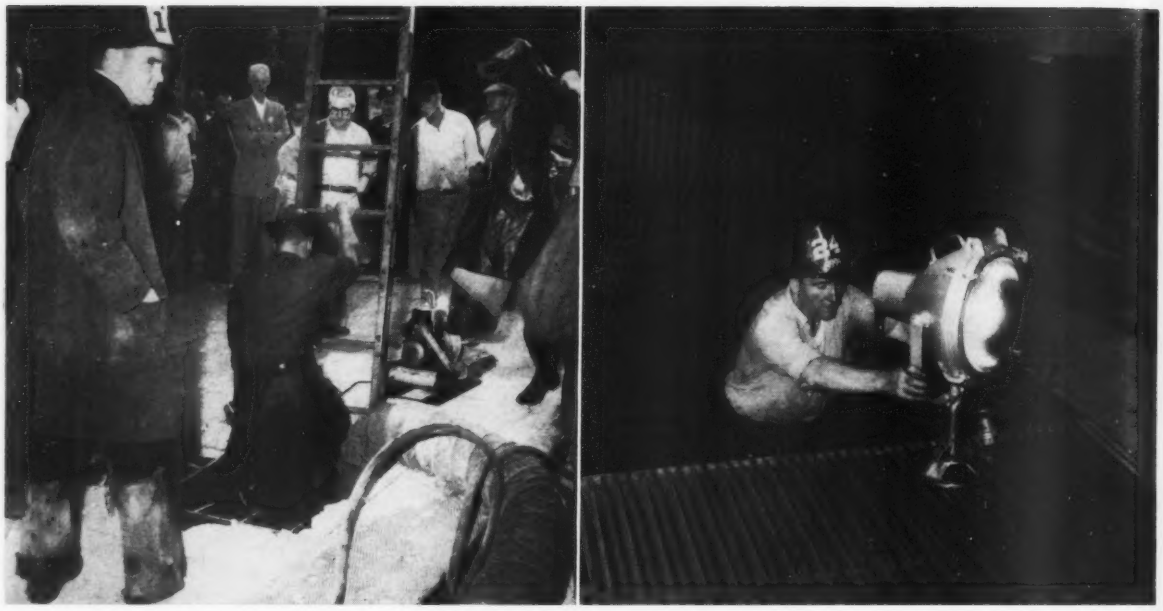


Paging speaker is located on wall of locker and uniform room of new station. The speakers are located in strategic positions throughout each station in order to give full coverage and built-in safety features prevent loss of messages

Control console installed in watch room contains preamplifier and power amplifier. Volume adjustments are possible



Left: Fire fighters descend through breached sidewalk to reach stubborn blaze in abandoned Manhattan subway station. Heavy smoke made it difficult to enter by more normal routes. Smoke ejectors and portable generators played stellar roles in operation. **Right:** Floods and spot lights were taken into subway through sidewalk gratings and other openings to light way for firemen

Subway Second-Alarmer Proves Punishing Fire

THIS WAS ONE of those fires that hardly makes the headlines, but which punish the fire fighter out of all proportion to their size and spectacularity. It was just another of those workers, peculiar to New York, with its labyrinth subways and uncharted basement areas.

It really started when they removed the old East Side 18th Street IRT subway station about five years ago because of the lengthening of the 23rd street station. At that time the kiosks were taken away and the sidewalk entrances leveled and sealed off with concrete.

The stage was further set for this drama when piles of rubbish and wooden crates were allowed to accumulate in the center of the platform on the northbound side of 18th Street and Fourth Avenue, where the old change booth and turnstiles once stood.

The show got going when persons or things unknown touched off the stage settings. The first alarm was telephoned at 3:31 p.m., July 14th, by a Transit Authority patrolman, who noticed the dense clouds of smoke in the tunnel while riding a southbound express. Box 412 was struck at 3:31 and responding units given particulars by radio.

The first alarm brought Engines 14, 72, 5 and 16; Ladders 3 and 7; Chief Wood of the 3rd Division and chiefs of the 6 and 7 Battalions (first due, Chief Lynch). A special call for a searchlight unit was sounded at 3:58 p.m.

The second alarm was transmitted at 4:12 p.m. which brought Engines 33, 18, 1, and 3; Ladder 1 and Rescue 1. Relocating on this alarm were Engines 15/5, 44/16, 32/33, 34/18 and 54/1; Ladder 18/3. A smoke ejector was also special-called.

The first problem was to find the fire. Search was begun at once—and power was ordered off on northbound tracks as soon as it was determined just where the fire was located, and the extent of the problem of reaching it with hose lines and extinguishers. That was shortly before 4:00 p.m. When the second alarm was dispatched at 4:12 p.m., power in the southbound tracks was also cut.

Two northbound trains were stalled between Astor Place and 14th Street when power was shut off and 75 passengers had to be led along the track to a safe exit. The smoky stubborn blaze halted all traffic on the Lexington Avenue IRT subway between Brooklyn Bridge and Grand Central for more than two hours.

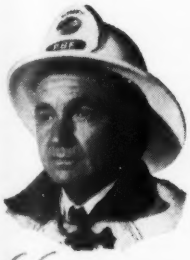
During that period some 75 fire fighters of eight engine and three ladder companies and a rescue squad, fought a ding-dong battle with a fire that couldn't be ventilated; could not be seen from above and could only be approached under the most trying conditions; that gave off heat to mix with the torpid temperature of the day (it was well above the 80's with high humidity).

At the outset the only way to get to the fire was via the tube, laying hose lines through the smoke filled tunnel under Fourth Avenue, from emergency entrance gratings in the sidewalks at Union Square and Twentieth Street. Meantime, firemen went to work to cut through the heavy concrete sidewalk at the corners of Eighteenth Street and Fourth Avenue, to rid the tube of smoke and gases, which were taking a heavy toll of men below, even though most of them were masked. Swinging sledges on such a day was back-breaking—and not too healthy on the lungs. But the members of Rescue 1 and the ladder units stuck it out.

Chief Masset called for compressors from the Con-Edison Company which ultimately arrived and in time the old concrete hatch of the kiosk (vintage 1900) was excavated.

Down below, masked fire fighters, in their heavy rubbers, boots and helmets finally got water on the fire, but not before five of them were overcome by the heat and smoke. One other fireman suffered a foot puncture wound. All hands, topside and "below decks," took a beating they won't forget.

The fire was declared under control at 4:40 p.m. and out at 5:05. Power was restored on the line at 6:20 p.m. and service resumed at 6:30. Altogether, 72 trains were affected by the fire. There's an epilogue act to this "smellerdrama." It is reported that future sidewalk closings will have hinged hatches. □□



Chief Steve Adley
Pittsburgh
Fire Department
Pittsburgh, Pennsylvania

"With 1065 men to keep on top of current fire-fighting methods, I need plenty of information. And I get it in the pamphlets and bulletins the Association sends out. We lift material that applies to our needs, print it up, and distribute it to all departments. Fits right into our training program, too."

Chief Roy D. Goettel
Mt. Lebanon
Volunteer Fire Department
Mt. Lebanon, Pennsylvania

"The IAFC has helped me plenty. Mutual Aid is one example. How much or how little should you do? I wrote the Association, got a complete run-down on activities of other Departments. The report helped me answer my problems. And the News Letter's comments on legislature keep me up-to-date. I'm 100% for IAFC."

Chief Fred Grossman, Jr.
Baldwin Township
Volunteer Fire Department
Baldwin Township, Pennsylvania

"We first learned of "wet water" through the Association bulletins. And believe me, we have put it to good use. We like the equipment maintenance information, too. Mighty important to Volunteers. We get a lot of good stuff from the complete fire reports the Association puts out. IAFC is really part of our Department."

Chief William H. Thuer
U.S. Steel,
Homestead Plant Fire Department
Homestead, Pennsylvania

"I wouldn't trade my membership in IAFC for anything. We have a continuing training program here, and IAFC bulletins and publications are our handbooks. Another thing, we get lots of information on hand fire extinguishers. Helps us keep our guard up because of tips on use and maintenance."

Your membership in the IAFC will mean as much to you as it does to these other Chiefs

These comments from active members give you some idea of the wealth of help and information that goes with a membership in the International Association of Fire Chiefs, Inc. And each year these services are expanding to help keep pace with the need for more effective and efficient fire fighting.

This year, for example, there will be special mailings from the National Board of Fire Underwriters, National Fire Protection Association, Federation of Mutual Insurances Companies, and many others. All dealing with your problems and needs. Special publications are in the works, ranging from a revised edition of Radiation and Monitoring Manual to selected papers from the Fire Departments Instructors' Conference. In other words, a complete library that keeps your fire service up-to-date.

Fire Prevention Programs, Speaker's Bureau, Films, and a complete mobilization of Public Relations activities to gain recognition for the fire fighter are other points in our expanding operation.

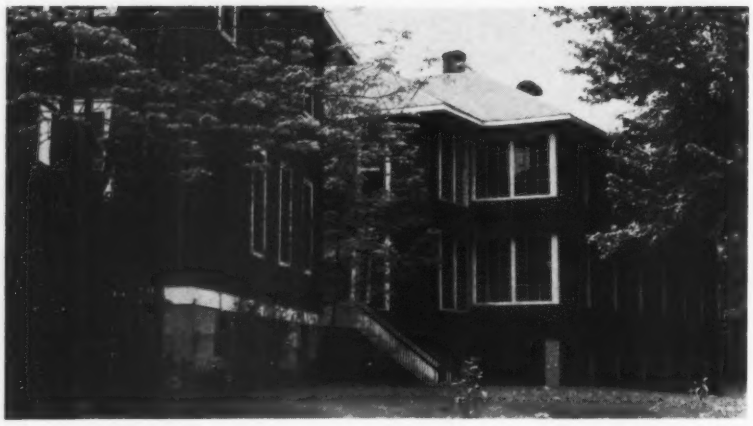
There's no question about it. The IAFC is really going places, and as a member, you will benefit. And it's not all one way . . . we need your support and help, too.

You can get your application blank from any active member, or, if you prefer, write the IAFC at the address below. Do it now. You'll be taking a big step forward in bettering the fire-fighting efficiency of your operation.

INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

HEADQUARTERS OFFICE
232 MADISON AVENUE
NEW YORK 16, N. Y.

This space contributed by sustaining members IAFC



Ontario Fire Marshal's Office photo

After remodeling, this will be the main building of the Ontario Fire College

Funds for Ontario Fire College Assured

Final decision of the Ontario, Canada, Cabinet was made August 14, authorizing the immediate start of a fire college in Ontario and providing initial funds for purchase of a site and the necessary alterations and renovations of existing buildings on the property. The budget of the Fire Marshal's Office for the year 1957 contained a sum of $100,000 for a fire college. It is understood the province will provide this and other funds.

The Ontario Fire College, as it will be known, will be located on the outskirts of Gravenhurst, Ont., on Lake Muskoka, in the midst of what is said to be the most beautiful resort area of the province. The property has 2,800 feet of shoreline on the lake and can be reached by car over controlled access highway in about two hours' travel time from Toronto. It has the advantage of central location for the Province of Ontario which has the largest number of fire departments of all the Canadian provinces.

The site includes 120 acres having two large institutional buildings and a number of smaller structures of various types, most of which it is reported, can be renovated to satisfactorily function for fire college premises.

Some specialized buildings such as a training tower and test fire building will be needed, and, according to Ontario Fire Marshal William J. Scott, work on this will start as soon as possible. Due to the season of the year, with cold weather approaching, alterations will probably begin in the spring. Marshal Scott states that "we do expect to be functioning to a major degree by next summer." If conditions permit, the formal opening of the college will coincide with the annual meeting of the Canadian Fire Marshal's Association in St. John's, Newfoundland, or the annual conference of the Canadian Association of Fire Chiefs, scheduled to meet in Hamilton, Ont., beginning August 18, 1958.

NBFU Large-Loss Fire Statistics Released

The National Board of Fire Underwriters has made public for the first time partial results of a continuing research of the factors involved in fire losses of $100,000 or more.

The study was begun over four years ago and 15,000 reports, going back as far as 1929, were analyzed. The results disclosed are based on 662 loss reports for 1956 totaling $160 million.

Report of this undertaking was made at the 91st annual meeting of the National Board of Fire Underwriters in the Hotel Commodore, New York, by Edwin H. Forkel, president of the National Fire Insurance Company, Hartford, and chairman of the National Board's Committee on Statistics and Origin of Losses.

According to the report, the three principal causes of the development of small fires into large ones are structural deficiencies of the buildings, delayed discovery of the fires and flammable contents of the buildings.

The tabulation showing the frequency of occurrence of outstanding factors, one or more of which were responsible for the growth of 662 fires during 1956, follows:

Classification of Factor	Frequency
Building and Structure (Structural Deficiencies)	506
Delayed Discovery of Fire	423
Flammable Contents	202
Sprinkler System Failures	162
Delayed Access to Fire due to Type of Construction or Intensity of Fire	144
Water Supply Deficiencies or Failures	136
Building Maintenance Deficiencies	117
Weather	92
Buildings and Structure—Difficulties Resulting from Location	77
Building and Structure Interior Changes	77
Delayed Alarm	74
Storage and Warehousing—Improper Practices	67
Watchmen and Employee Performance Failures	44
Public Fire Department Apparatus and Equipment Deficiencies and Failures	38
Public Fire Department—Inadequacies of Manpower and Training	30
Public Fire Department—Performance Deficiencies of Officers and Men	28
Public Fire Department—Arrival of Apparatus Delayed	25

The committee report pointed up these important facts:

1. Fire losses in 1956 reached a record high of $989 million, an increase of 12 per cent over losses of $885 million for 1955, and the upward trend continued through the first quarter of the present calendar year.
2. While there were fewer building fires in 1956 than for the year before, losses perceptibly increased.
3. Building fires in cities of over a million population declined by about 8 per cent from 1955.
4. Communities of 10,000 to 25,000 population had the greatest number of building fires per capita.
5. "Matches-Smoking" continued to be the leading cause of fires.

Anoka Reaches Century Mark

The Anoka, Minn., Fire Department is celebrating the 100th anniversary of its founding. It had its beginning when an independent volunteer company was incorporated under the name of Protection Hook and Ladder Co. No. 1.

The first apparatus was a hand-drawn hook and ladder which the members built themselves in 1857 from spruce logs they hauled from the swamps. The members also built a hall and in the following year presented the building and the apparatus to the city.

Today the department has 26 volunteer members and four paid men who operate three pumpers, a rural pumper, a quad and an ambulance as well as a rescue boat. Besides serving the City of Anoka, the fire department contracts with eight townships and one village, covering an area of approximately 230 square miles.

L.A. Squad "Powers" Stork

A Los Angeles County Fire Department rescue squad helped a newborn baby gets its first glimpse of the world on the night of April 20 during a power blackout caused by flood conditions in West Hollywood.

County Rescue Co. 8 provided power to the La Brea Hospital while an 8-pound, 3-ounce boy was being delivered to Mrs. Jack Walker.

The firemen stood by with their generator equipment for nearly an hour and a half before power was restored.

Cliff Dektar

WATER LIMITED?

If your water supply is limited . . . or if you operate from a tanker and must conserve your water . . . here's a new AKRON BRASS PDQ for you. A lower gallonage 1½" model with all of the features of the regular PDQ.

Resilient rubber bumper for protection against damage

Corrugated no-slip grip

Adjustable through all angles of fog and straight stream

Positive stream positioning — by feel or sight. Clicks into fog patterns or straight stream.

Swiveling "Rocker Lug" base — handle is always on top

Man-size handle

Pattern selector — can be seen in any position

Cast indicator — can't be damaged in any way

Akron quality ball shut-off

NEW! AKRON'S 1½" 50 G.P.M. PDQ FOG NOZZLE

style 1215*

Also Available in Higher Gallonage

THE COMPLETE LINE OF PDQ NOZZLES

PERFORMANCE DATA—at 100 P.S.I. Nozzle Pressure

Style	Size	GPM	LIST PRICE	
			PB	CP
1209	¾" 1"	24	$67.50	$72.00
*1215	1½"	50	72.00	76.50
1218	1½"	95	72.00	76.50
1219	1½"	125	72.00	76.50
1229	2½" for PP	250	78.50	84.00
1239	2½" Dir. Con.	250	92.00	97.50
1249	2½" with PP	250	102.00	115.50

AKRON BRASS
FIRE FIGHTING EQUIPMENT

Akron Brass Mfg. Company, Inc. • Wooster, Ohio

By ROI B. WOOLLEY

PART XXIV (Continued)

Removability . . . Combustibility . . . Damageability

Quenching Oil: Quenching oil, used in place of water in heat treating of metals, may become mixed with water due to fire or other causes. If allowed to settle from 24 to 36 hours the water can be pumped out leaving the oil ready for use.

When contaminated with foam solutions, the excess foam should be skimmed off, water added and the mixture allowed to settle and the water drawn off as before. This operation may have to be repeated one or more times before the foam is fully removed.

Ready to Wear Goods: Suits are usually kept in full length center or wall cases. A damage that can be avoided and that often occurs is caused by water collecting on top of the cases and seeping through to the garments, streaking and staining them. When suits are wet they are badly damaged through the lining of the coat or jacket, shrinking and throwing the garment out of shape. Often the material will shrink and leave the lining showing all around the bottom.

Children's dresses are usually kept in drawers in the lower part of wall cases, or under the counter, and water or smoke is not likely to reach these garments. They are often affected by water running down the wall behind the cases and entering the drawers from the rear. This is a very bad damage as it is not anticipated and frequently is not discovered until every garment in the drawer is affected. The children's dresses are generally of wool or cotton, and are not damaged as badly as women's garments, as they are practically all staples and have no fancy colors, and even if damaged would sell much more readily than a woman's garment.

Ribbons: The manner of handling and the position in stock will govern to a large extent the damage sustained by ribbons. All the wider widths of ribbons are rolled usually in 10-yard lengths, in paper which is made expressly for the purpose, to protect them from dust and dirt. The paper is about an inch wider than the ribbon and is rolled so as to leave only a half yard of ribbon exposed. The bolts of ribbon are sometimes stood on end, on top of each other, and sometimes laid sideways on long racks. The bolts on end are subject to much greater damage than those that are laid sideways, as the water dropping on them will go through the whole bolt of ribbon by way of the open edge, and streak the whole piece, while in those that are laid sideways it cannot penetrate further than the outside yard or two unless left to soak. The ribbons so kept must be handled quickly, as the paper used will absorb water. The smoke damage is light, as the smoke cannot come in contact with any great amount of ribbon due to the protecting paper. All the narrow widths of ribbon and also velvet ribbons are kept in boxes. The velvet ribbons must be kept away from water, which affects them the same as other ribbons. In some ribbon departments fancy bows and novelties of all descriptions for women's wear are made up and kept on display. These novelties are generally made of the most delicate shades and colors and are very perishable, and the chance of damage is very great.

Rugs: Rugs, when finished by the manufacturer, are shipped to wholesalers or retailers packed in common burlap. Burlap may be used as a protection from soilage and not intended to protect the contents from water damage.

To protect the rugs against water damage, they should be wrapped in a water-resistant material and covered on the outside with strong burlap.

In most large stores, rugs are placed one upon another in piles. These piles should be on platforms six inches or more off the floor. They should never be allowed to be piled on the floor as the water damage will then be considerable in the event of fire.

Rugs of an inferior grade will fade, and the colors run if subjected to water. Expensive rugs can be dried out and a reasonable salvage realized. Rugs on display should be covered after hours with a dustproof and waterproof cover.

Shoes (See also Leather): Shoes, after finishing at the factory, are ordinarily placed in pairs, wrapped in tissue paper and enclosed in a cheap cardboard box with no thought given to the protection of the shoes from water. Expensive and cheap shoes are packed in the same manner. The shoes are sold by the manufacturers to the jobbers in paper cartons or wooden cases containing from 12 to 60 pairs of shoes in the boxes before mentioned. These cartons are made from various kinds of material, the majority of the cartons being made from corrugated paper. They are made with a view to form a practical shipping package in as cheap a manner as possible.

Silks: Raw silk in skeins, on spools or warp beams, which has not been boiled off in the process of finishing, is practically immune from damage by water or moderate heat. The fibre has a protective coating in the boiling process. If slightly wet, bales may be opened by removing the wrapping and the silk dried in the bale, but if badly wet the skeins should be unpacked and dried. Owing to the oily nature of the coating, water penetrates only slightly into silk on spools or beams and this can usually be dried in the sun or in a steam-heated dryer or room. Fibre and wooden spools are usually damaged to such an extent by water as to require rewinding of the silk.

Piece goods of pure silk yield a much better salvage than those of poorer quality, except in the delicate shades where spots and streaks would be more apt to show. Colors are not always fast and prompt salvage work pays good dividends because of the high values involved. Silk in bolts is usually folded in yard, meter, or yard and a quarter lengths and wrapped in a light weight pasteboard or heavy paper. Stains running crosswise of the goods would yield nothing but short lengths when salvaged. Rolls of silk average better salvage because water penetrates a less distance into the rolls. If wet on selvage end, the loss is very small as nearly the full width is available, and if wet on folded end two single widths may be obtained with, however, a more limited field of usefulness.

The best grades of silk velvet show good salvage which becomes rapidly less with the admixture of increasing amounts of cotton or rayon. The value of silk piece goods should justify the small extra expense of providing a wrapping of moisture-proof paper either transparent, which would show off the goods, or opaque.

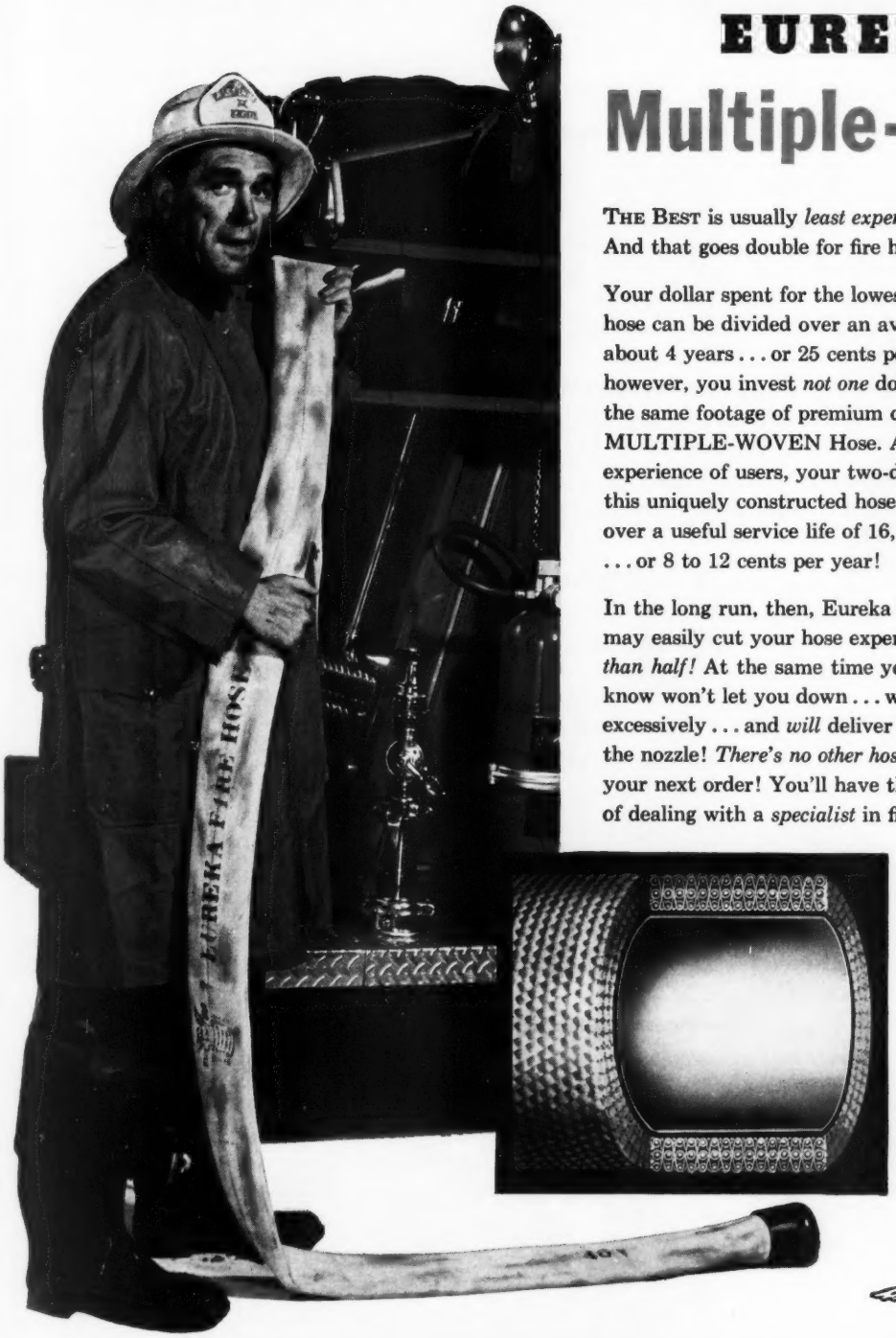
Steel and Steel Products: Sheet steel is subject to rust and spotting due to moisture. It should be promptly wiped clean. Where sheet steel is piled in cardboard containers, there have been instances of piles collapsing during fires when the containers become wet. Steel rolls as used in machinery should be given special at-

Continued on page 1054

Let's talk DOLLARS and SENSE about

EUREKA

Multiple-Woven



THE BEST is usually *least expensive in the long run.* And that goes double for fire hose! Here's why:

Your dollar spent for the lowest-priced approved hose can be divided over an average service life of about 4 years . . . or 25 cents per year. Suppose, however, you invest *not one* dollar but *two dollars* in the same footage of premium quality Eureka MULTIPLE-WOVEN Hose. According to the experience of users, your two-dollar investment in this uniquely constructed hose may well be spread over a useful service life of 16, 20 or even 24 years . . . or 8 to 12 cents per year!

In the long run, then, Eureka MULTIPLE-WOVEN may easily cut your hose expenditures *by more than half!* At the same time you'll have a hose you know won't let you down . . . won't warp or writhe excessively . . . and *will* deliver maximum pressure to the nozzle! *There's no other hose like it.* Specify it on your next order! You'll have the added satisfaction of dealing with a *specialist* in fire hose!

All plies of Eureka Multiple-Woven Hose are woven *and interwoven* simultaneously, leaving no space between plies for collection of water, dirt or mildew.

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey

Division of United States Rubber

WHAT'S NEW

Among the Manufacturers

- products
- processes
- personalities

Whitney Marketing Manager

Appointment of Myron E. Whitney as manager of marketing for mobile radio products was announced recently by Norman Caplan, mobile products manager, Bendix Radio Division, Bendix Aviation Corporation, Baltimore, Md.

In his new capacity, Mr. Whitney will apply his long experience in marketing sales and service to Bendix Dyna-Com two-way mobile radio products presently used by leading industries throughout the nation.

Prior to his present appointment, Mr. Whitney had been assistant marketing director of two-way and portable communication products for Motorola, Inc.

Rockwood Offices Combined

The New York office of the Rockwood Sprinkler Co. formerly located at 111 John Street, New York 38, N. Y., has been combined with company offices located at 700 Broad Street, Newark 2, N. J.

New Chain Saws

McCulloch Motors Corp., Los Angeles, Calif., has introduced two new chain saws claimed to have the greatest power-to-weight ratio in chain saw history.

The Super 44, which produces 6.5 hp and weighs 19 pounds, is a direct-drive model. Its gear-driven companion, The Super 55, produces 6.5 hp and weighs 22 pounds. Both are now available at McCulloch dealers.

New FWD Gulf Dealer

Allied Safety Equipment Company, Inc., 361 M and M Building, Houston, Tex., has been appointed sales, parts and service dealer for FWD fire apparatus in the Texas Gulf Coast area by Four Wheel Drive Auto Company, Clintonville, Wis., it has been announced by G. F. DeCoursin, vice president—sales.

Mine Safety Bulletin

A new line of MSA aluminized asbestos safety clothing is described in a four-page colorful illustrated bulletin (No. 1301-7) just published by Mine Safety Appliances Company, Pittsburgh, Pa.

The bulletin reviews the protective properties of the new aluminized asbestos safety clothing and illustrates each apparel item available in the MSA line.

Memco Aerial Ladder Catalog

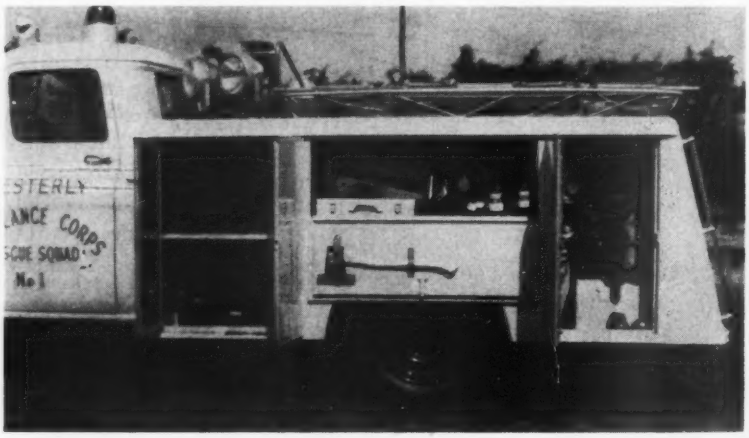
The Memco Aerial Ladder Co., 1007 N. W. 36th Street, Oklahoma City 18, Okla., has announced their new 1958 catalog. The colorful, plastic bound, 24-page publication describes applications of the company's ladder to various types of apparatus. A copy may be obtained by writing the company.

Calcium Chloride Bulletin

Brief MB-19 "First Aid Fire Protection with Calcium Chloride" contains data on storage of calcium chloride, freezing points of solutions, and methods for preparing standard solutions for use in fire extinguishing equipment. For a free copy write the Calcium Chloride Institute, 909 Ring Building, Washington 6, D. C.

Reading Body Works Introduces New Rescue Unit

New "emergency-planned" rescue unit manufactured by the Reading Body Works, Inc., of Reading, Pa., fits all standard chassis from one-half to one and a half tons. Specially adapted by the Providence Body Company, Cranston, R. I., the vehicle includes a power generator mounted on top of body in the rear of cab and two pairs of searchlights. Water-tight compartments hold resuscitator, coils of rope and wire, blankets, axes, first aid and emergency equipment.



International Industrial Tanker-Pumper

Recently placed in service in Akron, Ohio, to provide fire protection for the new $1 million Akron-Cleveland consolidated terminal facilities of Motor Cargo, Inc., is this International model V-195 tractor-trailer fire fighting apparatus. Kept in readiness 'round-the-clock at the sprawling West Richfield site, the unit includes a 1,500-gallon water tank with 250-gpm pump, two high pressure boost-

BE SAFE FROM FIRE...

with Kidde extinguishing equipment

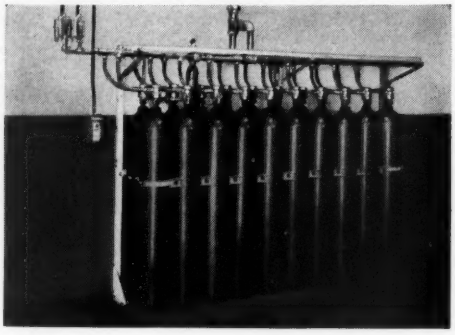
PORTABLE EXTINGUISHERS

Trigger Carbon Dioxide | Squeeze-Valve Carbon Dioxide | Foam Soda-Acid Clear Water Anti-Freeze | Pressurized Water Anti-Freeze | Pressurized Dry Chemical | Cartridge-Operated Dry Chemical | Pump Tank Water Anti-Freeze | VL Pressurized | VL Pump

Kidde hand portables are designed to knock fires out *fast*, come in a variety of types and models. Kidde offers a complete line, a type and size for every need. The Kidde line includes carbon dioxide extinguishers with fast-acting trigger release or squeeze-valve release in capacities of 2½ to 20 pounds. Kidde dry chemical extinguishers can be had in pressurized models of 5, 10, 20 and 30 pounds capacity, and in cartridge-operated models of 20 and 30 pounds.

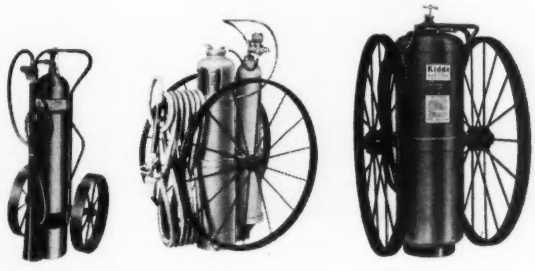
New Kidde wet chemical extinguishers (foam, soda-acid) are available in 2½ gallon bronze or stainless steel models, including cartridge-operated and pressurized water or water-anti-freeze units. Kidde vaporizing liquid extinguishers come in pump capacities of 1 and 1½ quarts, pressurized in 1 and 1½ quarts and 1 gallon. Kidde pump tank extinguishers, in steel or copper shells, are available in 2½ and 5-gallon sizes.

CUSTOM-ENGINEERED CARBON DIOXIDE SYSTEMS



New Kidde pressure-operated carbon dioxide extinguishing systems are individually designed to fully protect even the most dangerous hazards, use no falling weights or clumsy mechanical triggering methods. Pneumatic Control Heads insure instant and complete carbon dioxide discharge. Directional valves afford protection to more than one hazard using the same bank of carbon dioxide cylinders. All operating parts are self-enclosed for safety. Visual indicators show at a glance if system is "set" or "released." Thermostatically operated systems, and package systems for flammable liquid hazards up to 6000 cubic feet are also available.

MOBILE EQUIPMENT



50, 75 and 100-Lb. Carbon Dioxide | 150-Pound Dry Chemical | 40-Gallon Foam, Soda-Acid

For major fire hazards, get a mobile unit. Wheeled carbon dioxide units are available in 50, 75, and 100-pound capacities, in one cylinder. Shut-off valve located at nozzle gives operator complete control. 150-pound dry chemical unit has straight stream for long range . . . fan pattern for wide coverage. Single-lever control for "on", "off", "fan", or "straight" discharge pattern. 50 feet of hose. 40-gallon wheeled foam unit delivers more than ten times its liquid content capacity in fire-smothering foam. Ideal protection against flammable liquid fires. 50 feet of hose. All units give expert results even with inexperienced operator.

Kidde (K Kidde)

Walter Kidde & Company, Inc., 1033 Main St., Belleville 9, N. J.

Walter Kidde & Company of Canada Ltd., Montreal—Toronto

er lines, fire extinguishers, ladder, pike poles and axes. Motor Cargo yard drivers, trained in fire fighting procedures, man the equipment. The carrier also has placed its truck at disposal of the neighboring Bath and Richfield fire departments.

Gorman-Rupp Promotions

Kenneth H. Cadigan and Gilmore Hiett, sales and advertising executives, are newly-elected members of the board of directors of The Gorman-Rupp Company, Mansfield, Ohio. Mr. Cadigan is vice-president in charge of sales and Mr. Hiett recently was promoted from manager of advertising and sales promotion to vice-president.

Kenneth C. Cadigan

Gilmore Hiett

Other promotions announced after the company's recent annual meeting are: Charles J. Taylor, chief engineer; Robert Regula, manager of irrigation pump sales; Carl F. Frederick, company purchasing agent; Stanley McFarlin, assistant chief engineer; Richard E. Flockenzier, auditor; and Dale D. McKinley, assistant advertising manager.

Talking Fire Alarm

The Antrex Corporation, 134 North LaSalle St., Chicago 2, Ill. is marketing a talking fire alarm called The Screaming Sentry which is activated by standard fire, heat or smoke detecting devices. It is claimed to scream an alarm that can be heard up to one-eighth of a mile. The alarm continues to broadcast out its message until turned off. The continuous message is made possible by the use of an endless tape loop.

Briarcliff Manor Dedicates New Apparatus

The Briarcliff Manor, N. Y., Fire Department recently accepted delivery of a Model B95F, 1,000-gpm pumper and a Model B85F, 75-foot aerial ladder from Mack Trucks, Inc. In the photograph Fire Commissioner Colby presents the keys to the all-white apparatus to Chief William Bowers (right) as Assistant Chiefs Leighton and Fitzgerald of the department look on.

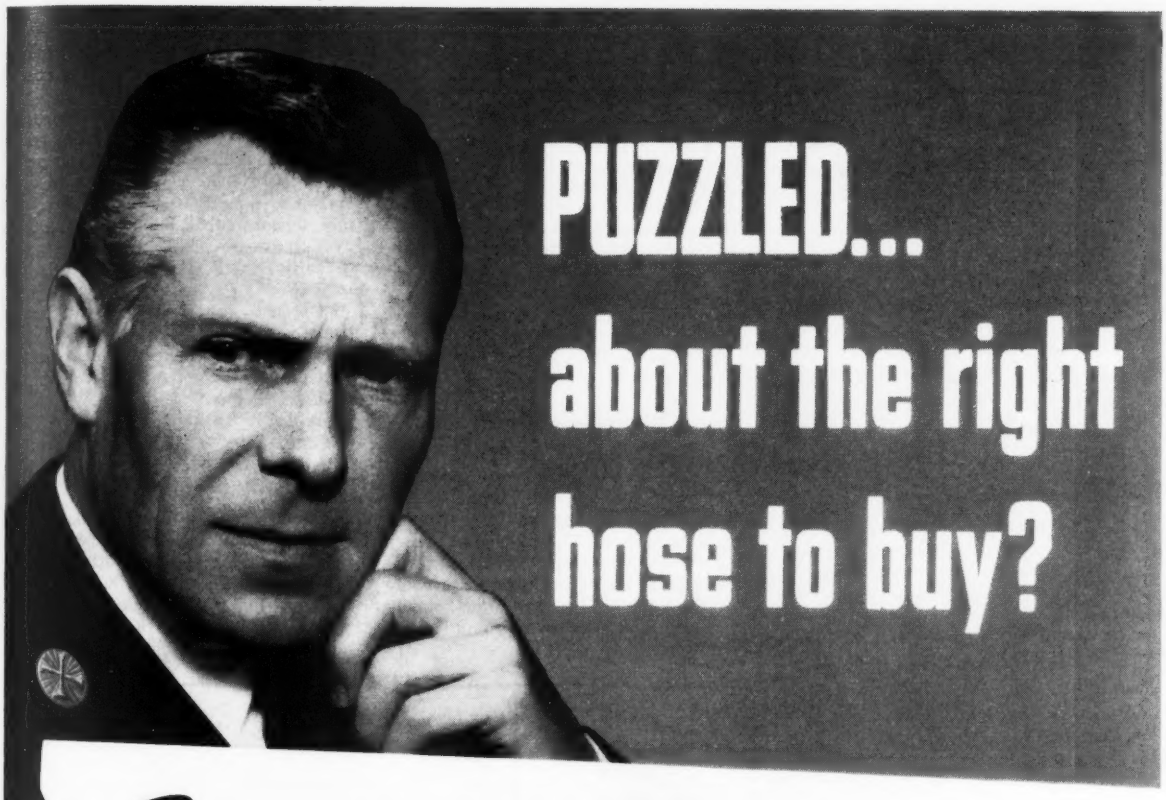
Hose Bed Capacity Increased by Using Lightweight Hose

The Newtown, Pa., Fire Association puts 2,500 feet of hose in a truck designed for only 1,400 feet, according to Fire Chief William S. Ettenger. This increased truck capacity, he says, has resulted from the use of Flexrite Dacron fire hose, manufactured by Hamilton Rubber Corp., Div., Acme-Hamilton Manufacturing Corp., Trenton, N. J.

"It is like having two trucks in one," reports Chief Ettenger. "We serve a large rural area and often need the extra hose length. A few weeks ago we used 1,450 feet of hose to pump from a creek to a burning barn. With the old type hose we would have been 50 feet short, but with this lighter, more flexible hose we were able to reach the barn and still have a reserve supply.

"Farmers have been building ponds on their properties to provide a reserve supply of water to use in case of fire. These ponds are usually in the neighborhood of 900 to 1,000 feet from the house or barn. With the old hose we could run only one line over this distance, but with new style we can run at least two lines —doubling the amount of water we can put on the fire."

Continued on page 1070



PUZZLED... about the right hose to buy?

Remember: Only **BOSTON** *offers every important feature!*

1. A hose for every fire fighting need from a proven, reliable source.
2. Single responsibility — couplings and fittings custom-made by the same company that manufactures the hose.
3. Made by the originators of circular woven fire hose — with over 75 years of experience.
4. Seamless tube of highest quality rubber for longest service life and least water absorption.
5. DACRON filler for lightness, extra strength, superior flexibility.
6. Longer service under most severe conditions.
7. Every length pressure tested prior to shipment.
8. Maximum protection against mildew, rot and freezing.
9. Compact . . . coils easily and dries quickly.
10. Fast, personalized service from warehouses throughout the United States.

See your BOSTON agent or write to BOSTON for free descriptive literature

BOSTON FIRE HOSE

BOSTON WOVEN HOSE & RUBBER COMPANY
BOSTON 3, MASSACHUSETTS

Also producers of INDUSTRIAL HOSE • BELTING • V-BELTS • MATTING • PACKING • TAPE

FALSE ALARMS

Convention Hangovers

He: "Pal, you look terrible."

Pal: "That's because I got up on the wrong side of the bed."

He: "Right or left?"

Pal: "Underneath."

Another thing a modern child learns at his mother's knee is to watch out for hot cigarette ashes.

Slip of the Month—

From the Scranton, Pa., Tribune: "The fire caused damage estimated by the owner of the home at between $25,000 and $27,000. It was partially caused by insurance."

Kinkchaser says: "It ain't dying as an old maid that worries the girls—it's living that way!"

The guest pastor was all wound up and ready to go at the invocation service of the firemen's convention. For an hour and a half he unwound, pouring it on like Tennyson's brook. Finally he asked, "What more can I say?"

There was a pause. Then from the rear ranks came a voice, "You might say Amen!"

Question: Why did the moron stand on the corner with a gun in one hand and a knife in the other?

Answer: He didn't know whether he should shoot up the alley or cut across the street.

A man wandered into a tennis tournament the other day and sat down on the bench.

"Whose game?" he asked.

A shy young thing sitting next to him looked up hopefully.

"I am," she replied.

Daffynition: Anatomy—Something that everybody has, but which looks a lot better on a girl."

Hit'n Run

Magistrate—"What induced you to strike your wife?"

Husband—"Well, your Wushipp, she 'ad 'er back to me, the fryin'-pan was 'andy, and the back door was open, so I thought I'd take a chance."

A general was sent south to inspect an army base. In the office he asked the civilian receptionist who was easy on the eyes, "What's the normal complement of this office?"

The southern cutie thought for a moment, then replied, "Ah believe the mos' compliment is 'Howya, honey chile—you're more luscious-lookin' then ever, this mawnin!' "

What—No Tips?

A college freshman decided to quit smoking. A doctor hypnotized him at a student assembly and told him he would stop because cigarettes would now taste like burned rubber. The student was then brought out of his trance.

Some time later the doctor got a note from the student. "I still have the habit," he wrote, "but the burnt-rubber flavor is killing me."

Heavenly Music

Across the street from a St. Louis hospital is St. Peter's parochial high school and its athletic field.

A patient in this hospital underwent a serious operation. He had been told, frankly, that his chances for survival were only about 50-50. While he was emerging foggily from anesthetics, the high school football band rehearsed lustily on the nearby field.

"What's that?" quavered the patient to his nurse.

"Oh that's just music from St. Peter's band," she said.

This rejoinder took a moment or two to sink in, whereupon the patient half rose and shouted:"

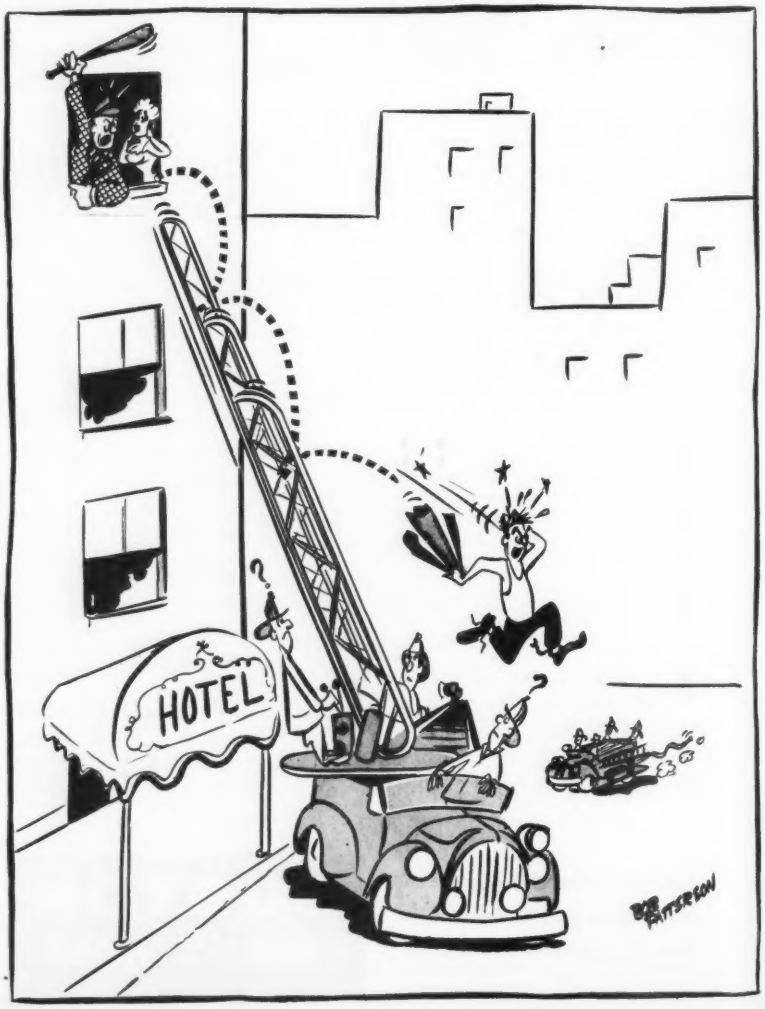
"Whoopee! I MADE IT!"

Pedigreed Performer

The man from up-country stood in the flea circus and watched in amazement the trained flea to do his stunts.

"Did you educate that flea yourself," he asked the owner of the circus.

"Yessir," he replied proudly, "I raised him from a pup."



"Well, what took you slobs so long?"

FOR THE BEST IN PROTECTION — SPECIFY MARS

For Fire Departments Exclusively!

JOSHUA MADE THE SUN STAND STILL
MARS MODEL 888 LIGHT MAKES ALL TRAFFIC AND PEDESTRIANS STAND STILL

U. S. Patent No. 2456287

An effective signalling or warning by a fire apparatus is becoming increasingly difficult because of the large number of multi-colored and moving lights encountered in the usual commercial street of a city. At the same time it is extremely important that quick recognition of fire apparatus be made and the streets properly cleared so that it can proceed without delay to its destination.

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Among the Buffs

By Paul C. Ditzel

BUFF HENRY F. WOOD of P. O. Box 14, Pelham, N. Y., has started an ambitious project which I certainly commend to fire fans everywhere.

As you may have noticed from the classified advertising pages of recent issues of FIRE ENGINEERING, Henry has developed a set of photos—or should I say engravings—of six Amoskeag Steamers on heavy 8 x 10 paper, suitable for framing.

Henry, who is fortunate enough to possess a copy of King's "A History of the American Steam Fire Engine" and who is also the lucky holder of an early Amoskeag catalog, figured out that buffs —and even the pros too, would be interested in a good cross-section of the history of early steamers, at their height. So he hunted up a photographer, to photograph some of these early steamers, which he has put together in an attractive set for what Elbert Hubbard used to call the cognocenti—in other words, the elect and select.

I don't want to turn this column over to Henry, but I will say that the set is all and more than buff Wood says it is. He sent me one of the first sets to come from the printer, and I'm for it. So, too, I believe, will be buffs and the pros who like to delve into the traditional and historical background of the fire service. I'm told that prints are available for $1.00 a piece, or a set of six at $5.00, postpaid. And so, to those of my readers who like to do a bit of retrospecting, I suggest you contact Henry Wood.

As some of you buff-historians know, the Amoskeag Manufacturing Company of Manchester, N. H., produced its first steam fire engine in 1859. The engine was an unimpressive but successful prototype which was purchased by the city in which it was built. The pumper gave continuous service for 17 years and was replaced by a much improved model built by the same company.

The name of the company was changed in 1877 to the Manchester Locomotive Works but production of the same well-known engines was continued for fire departments the world over. In 1902 the International Power Company assumed control and the manufacture of steamers was transferred to Providence, R. I.

By 1902 the gasoline-powered pump had established itself as the more efficient protective device and the manufacture of steam fire engines was discontinued. Between 1859 and 1909 approximately 900 engines had been built by this company.

Editor Roi Woolley reports that Thomas C. O'Reilly who wears badge No. 1446 in connection with his duty as a patrolman for the Newark, N. J., Police Department, is faithful to the police blue but is a red hot fire buff. Wonder how many policemen are buffs? I know one:

My good friend, Retired Detective Sergeant Patty McDonald of the Chicago Police Department who used to sit in the old Central Police Station press room with me on the midnight trick. Together we'd listen to the howling blizzards booming in off Lake Michigan and stay attentive to the fire department sounder and register which Commissioner Mike Corrigan installed in the press room. Patty was more of a fireman at heart than a policeman, I suspect, and used to start all sorts of wrangles around the press room poker table with his jibe: "It takes brains to be a cop and only brawn to be a fireman." Wonder where Patty is today? Still chasing the 5-11's I'm sure.

Raymond E. Williams of 3021 Winthrop Avenue, Indianapolis 5, Ind., is a transplanted Oklahoman who would like to get acquainted with any buffs or buff clubs in the Indianapolis vicinity. My files don't disclose any.

The Central Alarmers, Inc., of the Baltimore County Fire Department are up to their usual good deeds. The county police chief recently asked them to organize a blood bank for policemen similar to the one set up by the buffs not long ago for the county firemen.

Also from Baltimore-way, comes the news that the Box 414 Association was featured on Nelson Baker's television show. Representing the 414'ers on the show were Nate Hendler, Morton Katz, Charlie Price and Carvill de Shields. They brought their coffee wagon along so televiewers could get some idea of the type of work done by this excellent organization. On hand also was Deputy Chief John J. Killen who represented the Baltimore Fire Department.

Some writeup the Second Alarmers of Willow Grove, Pa., got in the August issue of *Woman's Day Magazine*. The story traces the organization of the group 21 years ago when two men got their wives to make a few gallons of hot coffee for firemen fighting a bad fire near their home.

"Today they have one of the most modern rescue units in the world, built with their own sweat and money and contributions from applauding Willow Grovers," says the story. The group's rig contains an arsenal of fire fighting and rescue gear and 31 men from various professions comprise the club. A police chief of a nearby town once summed up everyone's feelings about the Second Alarmers with, "Lord, I wish our town had an outfit like that!"

That's it until the bells go down again next month. Keep the reports and comments rolling to 4234 Don Diablo Drive, Los Angeles 8, Calif. □□

False Alarm Fatal

A Montreal, Quebec, Fireman was killed August 25 when he fell from a piece of fire apparatus while answering a false alarm of fire.

He was Fernand Defoy, 23. He was pronounced dead of a fractured skull before reaching the hospital.

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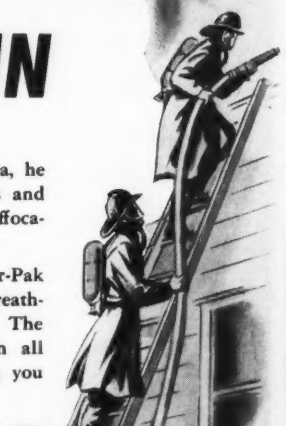
and LIVE to WIN



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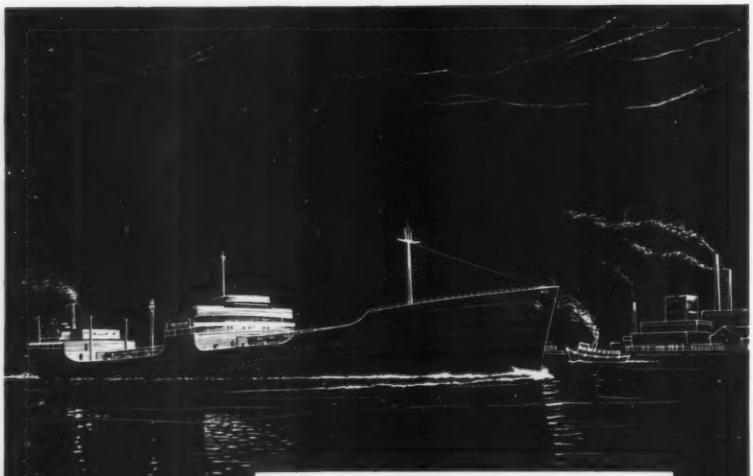

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SALVAGE

Continued from page 1044

tention after wetting and should be rotated in order to wipe and oil the surfaces. Rust marks even if scarcely noticeable may show up in finished work.

Sugar: Sugar, in the melted form burns freely, but under adequate sprinkler or hose protection, fires are usually extinguished with a small loss percentage. Jute bags, particularly the coarse fuzzy variety, permit a fire to spread rapidly and burrow its way into a pile. Fires of spontaneous origin have been traced to the use of the improperly washed bags previously used for nitrate of soda or oily commodities of an oxidizable nature. Piling in blocks of 3000 to 4000 bags each with aisles separating each block, affords an easy method of inventory as well as access to the pile from four sides in case of fire. Usually a fire is confined to the block in which it starts.

The principal loss in sugar is due to melting in case of a hot fire and to washing away the sugar in solution with water used to extinguish it. As raw sugar has to be refined anyway, all sugar remaining is salvable, at nearly full value. Scorched and wet refined sugar can either be put back in solution and refined again or sold for sweetening animal feeds or for the manufacture of alcohol or other commercial uses. At a temperature above 65° F., organisms attack wet sugar converting it into an invert sugar with a consequent loss of sweetness. Raw sugars which have been stored in a warm, humid atmosphere always contain a small percentage of invert sugar. Where wetting is superficial, or only the bottom bags of a pile are wet, an allowance for the loss of sweetness will usually be much less than the cost of repiling a large block.

Synthetic Fibres, Products: Varied synthetic fibres such as "acetate" fibres, "nylon," "orlon," "dacron," are subject to deformation by relatively low heat. Finished products resist water damage fairly well. Products of glass fibres afford higher heat resistance.

Tea: As packaged for merchandising, tea and tobacco give very poor salvage since even the slightest taint of smoke may cause damage.

Tobacco: Prompt handling by experienced personnel is important in providing maximum salvage.

Velvets, Velveteens and Corduroys: The damage to velvets, velveteens and corduroys is governed by the quality. Velveteens being cotton, the color will run and the pile will be flattened beyond restoration. The silk velvets with cotton backs are affected very much in the same manner; even a few drops of water seeming to spot them badly. However, a piece of silk velvet may be soaked in water, taken out, shaken thoroughly and dried without showing any ill effects. The common method used by milliners to freshen silk velvet is to hold it over steam. The cheaper grades of corduroy are filled with a glue preparation, and water will, in

small quantities, spot these, and in large quantities take all the body out. The best grades of corduroy are almost undamageable by water.

Wall Paper: Serious losses occur where wall paper is stored in large quantities. The rolls are tied in bundles and the bundles stacked on end, presenting a most difficult salvage situation. It is practically impossible for men to climb the piles and spread salvage covers, due to the fact that the piles are easily knocked down resulting in chaos where order should prevail. It is impractical to wrap stock of this nature when in storage.

It is recommended that stock be kept away from side walls and at least 36 inches below the ceiling, that boards of five-ply thickness 5 feet wide and 9 feet in length be used between each tier to tie the stock. Larger dealers should welcome this suggestion as a means of keeping their stock in an orderly manner. They would benefit in the regular operation of their business aside from the value of such an arrangement in the event of fire.

Wash Goods: These are not liable to damage from water, as they are made purposely to wash. But there is always the danger of colors running, and the term "wash goods" is in many instances a misnomer. The better grades of wash dress goods are kept in the same manner as silks, and the same class of damage obtains. In all of the sheer materials, a dressing is used to stiffen and give body to the fabric. If they are wet, even granting that the color will not run, the damage will be considerable, as the fabric will lose its body. This material will launder and look well; but the fact that it has lost its freshness will impair its salability. Shrinkage must always be watched for. A cheap quality of gingham will shrink as much, if not more, than any other fabric.

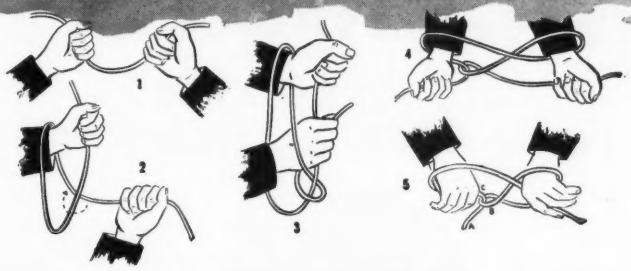
Wool: As a rule wool in the grease will not burn freely except in contact with an outside flame. Scoured wool is quite flammable and continues to burn slowly after ignition. Wool will stand temperatures ranging from 250° to 300° F. for a reasonable length of time as these temperatures are used regularly in carbonizing and drying processes.

Wet wool in the grease, which may be charred, should be immediately scoured. The charred wool, dirt and smoke odor, are all eliminated in the scouring process. Where heating has been severe there will be a weakening of fibre strength and permanent discoloration. Under ordinary circumstances prompt scouring will save wet wool from any damage. Where scouring facilities are not easily obtainable, air or oven drying may be used.

Woolen Dress Goods: Woolens of all kinds are supposed to be affected quite readily, particularly by smoke. Smoke damage should not be claimed or allowed unless a trace of discoloration is evident on the material. Of course the porous or loose texture woolens will take the odor of smoke, even without discoloration, but this odor will leave the mate-

TRY THIS

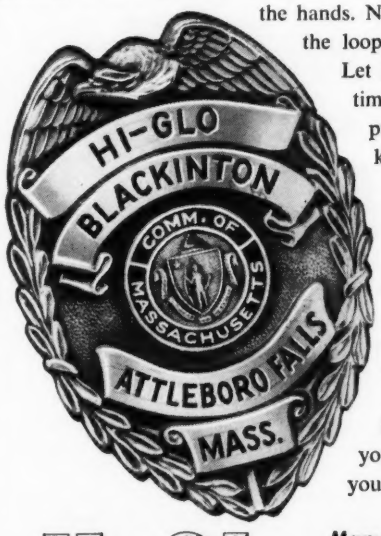
4th DIMENSIONAL KNOT



THE TRICK: Challenge anyone to tie a knot in a string that is held at both ends, without letting go of either end.

WHAT YOU NEED: A piece of twine four feet long.

PRESENTATION: Hold the string as in Figure 1. Drape the string over your left wrist as in Figure 2. Weave the right hand into the loop and out again as in Figure 3. The string should be in position as in Figure 4. Turn your hands down, letting the loops fall off the hands. Now for a very subtle move. As the loops fall, release end A (Figure 5). Let it slip through loop B. At the same time, grasp part C of end A and pull the string tight, and you have a knot. The final move cannot be seen when done quickly without hesitation.



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SECRETARY'S BLANK FORMS

Write for Catalog 351

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SINCE 1836

rial if well aired. Woolen dress goods are covered on the outside with a heavy wrapping paper, and only the selvage edge is exposed. In a well kept stock, smoke will not get much chance to reach the light colors; but water will damage them materially. Similar trouble will be encountered here as in the silks, due to colors running, but not to the same extent. With plain colors (such as dress goods), the colors are not nearly so likely to run as in silks, where one piece may have half-a-dozen colors, and if one of them is affected, the whole piece will be spoiled. A feature to be contended with here is the shrinkage. Various weaves are affected differently, the looser the weave the more likelihood there is of shrinkage. What is known as flannel cloth is very loose texture, and heat or hot smoke will draw it up or shrink it. Broadcloth is affected by water, which spots it.

Woolen underwear is always subject to shrinkage and the light colors will show stain. Extreme heat will draw up the material and smoke will streak or stain it. A stain to woolens is always worse than to cotton. Woolens should not be boiled to remove stains as they would shrink too much and weaken the fibre.

Yarns and Knit Goods: Yarns and knit goods are very susceptible to damage. Smoke stains them very quickly and water will shrink or cause the colors to run. Shop wear and fading in yarns will occur even with the most careful merchant. Some shades will fade if exposed to the light, and will often fade even in the box, if they are in stock any great length of time. This damage must not be confused with fire damage. □□

Newspapers Destroyed in Railroad Car Fire

Bridgeport firemen extinguish smoky fire in New Haven baggage car. Thousands of newspapers destined for Boston area, where local pressmen were on strike, were destroyed in the stubborn blaze. Firemen said the engineer halted the train in the Whiting Street yard of the New Haven Railroad when he was informed of the fire. Assistant Chief Jerome C. Barrett said the cause of the blaze was not known. —*Tom Magner*

World-Wide Fire News

Sunken Ship Blows Up

A sunken World War II ammunition ship, lying seven miles off Okinawa, blew up on July 1 and killed at least 32 Okinawans carrying on prohibited salvaging operations. It was believed ammunition aboard the ship had been touched off by an underwater cutting torch.

Eyewitnesses on shore said between 32 and 40 men were diving to the ship 150 feet down when the blast occurred. Five small boats supporting the divers were blown to bits. Officials pointed out that operations of this nature are illegal, and survivors usually make themselves scarce.

From the World News Ticker

One man was reported killed and six others seriously burned September 16 when an experimental rocket engine exploded while being tested at the Naval Air Station, Lake Denmark, N. J. . . . At least 10 persons were reported killed by a forest fire that swept across the Mediterranean island of Corsica. The blaze was finally controlled September 14 after causing heavy damage. . . . A fire that destroyed most of the famous Biarritz Casino at Biarritz, France, August 27, caused $1,250,000 damage. Two firemen were injured. The blaze was caused by a spark from a chandelier which set the cabaret's ceiling afire just before 600 guests were due to arrive. . . . An explosion tore through a British cruiser under construction in a Glasgow, Scotland, drydock, September 10, injuring more than a dozen workmen. Blast involved engine room of cruiser *Blake*. . . . Three persons were killed and five injured in a refrigerator explosion in Cairo, Egypt's main produce market, September 3. . . . In Los Angeles three men were convicted of first-degree murder August 16 in the fire-bombing of a bar on April 4. The jury recommended the death penalty. . . . One person was killed and two injured August 15, in an explosion at a Navy missile laboratory in West Virginia across from Cumberland, Md. . . . A car on the Senate's famous subway caught fire en route from the Capitol to the Senate Office Building, August 21. A spark from a wheel ignited grease on the car's underside. Flames were quickly extinguished; nobody injured. . . . A gasoline container exploded in Palermo, Italy, killing one person, injuring six and partially destroying four houses. . . . One of Japan's most famous landmarks, a 140-foot high pagoda that survived the ravages of storms and war in Tokyo, was destroyed by fire recently. Two bodies were found in the charred wreckage. The 186-year-old Buddhist structure stood next to the Temnoji Temple in Ueno Park. . . . Taipei, Formosa, police arrested a 22-year-old arsonist who said his uncle paid him to set fire to a paper warehouse. The fire lasted 48 hours and caused $160,000 damage. Li Sui-Hsu,

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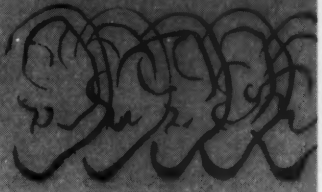

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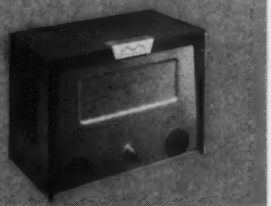
Both units feature powerful 5" speaker, fully tuned RF stage, built-in squelch. Housed in rugged metal cabinets. 110-120V, 60 cycle, AC only. U.L. approved. The Minute Man—$64.50. The Signal Master—$76.50.



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the arsonist, said his uncle rewarded him with 40 cents to set the fire. . . . An explosion at Penrhyndeudraeth, Wales, rocked a factory making cartridges on August 28, killing three women and a man. A dozen persons were injured. . . . Fire aboard the 15,437-ton *President Cleveland* gutted three of its first-class cabins, August 12, as the big vessel approached Yokohama from the United States. The ship's crew fought the fire for an hour. . . . It is reported that seven persons were killed and 50 others injured in the coal town of Asanol, near Calcutta, when a railroad car carrying fireworks exploded on August 1. □□

Persons in the News

Moller Named Berkeley Chief

Chester W. Moller has been appointed chief of the Berkeley, Calif., Fire Department succeeding the late Chief James H. LeStrange who died in 1956. Chief Moller entered the department in 1936 and advanced through the ranks to the post of assistant chief from which he was promoted to head the department.

Chief Moller served for six years on the State Commission for Fire Training and for four years on the State Fire Advisory Board. He also served one year as temporary chief of the El Cerrito, Calif., Fire Department, where he installed a modern administration system and training program. He is a past president and life member of the California State Firemen's Association and chairman of its committee on compensation and safety.

NYFIRO Promotions

Kenneth O. Smith, general manager, New York Fire Insurance Rating Organization, has announced the recent appointments of James E. Blowers, Paul B. Guenther and Robert C. Hayden as assistant managers.

Mr. Blowers, formerly chief engineer, will administer the expanding activities

of the organization in the municipal protection field.

Mr. Guenther, formerly Buffalo district secretary, will be assistant manager-comptroller.

Mr. Hayden, formerly research director, will be assistant manager-research.

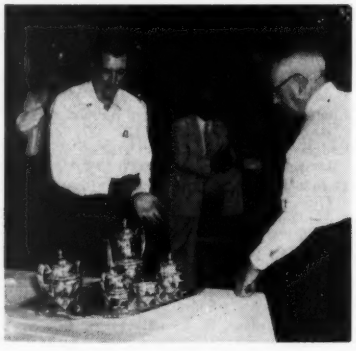
Chief A. W. Bilby Retires

Chief Arthur W. Bilby, Montclair, N. J., Fire Department, retired on October 15, after 43 years' service. He headed the department for the past 15 years.

Chief Bilby was appointed a probationary fireman on November 1, 1914; lieutenant in 1923; captain in 1926; assistant chief in 1941 and chief in 1942. From 1924 to 1942 he was in charge of the department training school.

Chief Bilby has served as president of the New Jersey Paid Fire Chiefs' Club and in 1956 was elected president of the New Jersey State Fire Chiefs' Association. He has a son, Clarence, who is a lieutenant in the Montclair department.

Columbia, S. C. Honors Fire Chief



Fire Chief Archie McCraney Marsh, Columbia, S. C., Fire Department, celebrated his golden anniversary with the department on August 7. At a luncheon given by citizens of the community he was presented with a color television set with a plaque commemorating his half-century of service and an inscribed gold watch. The members of the fire department held a surprise party for the chief and presented him with a silver service engraved with a message of their esteem.

BRACKETS

Solve Fire Hose Storage

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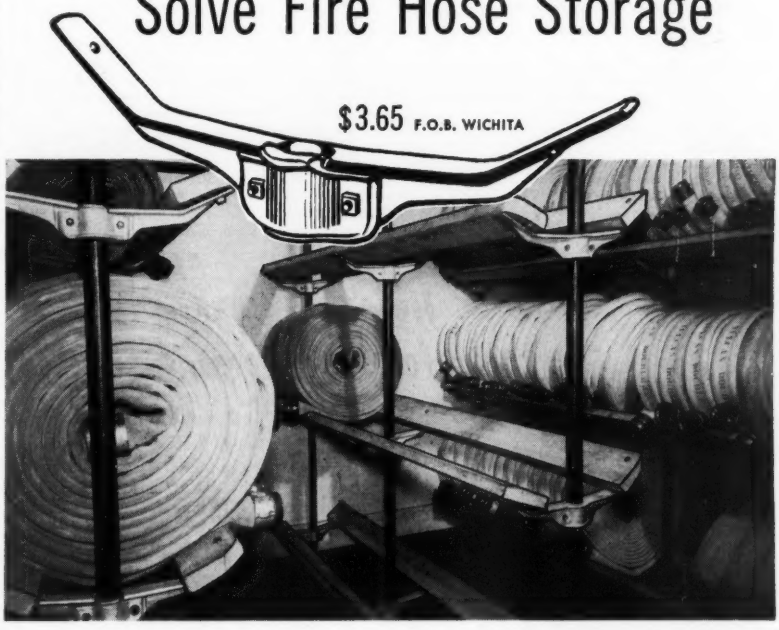
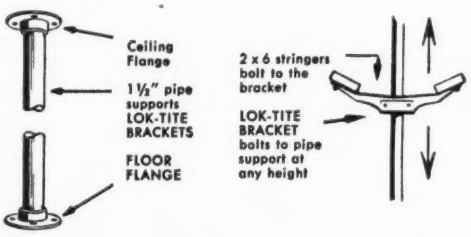


Do it yourself . . with LOK-TITE


Ceiling Flange
1½" pipe supports LOK-TITE BRACKETS
FLOOR FLANGE
2 x 6 stringers bolt to the bracket
LOK-TITE BRACKET bolts to pipe support at any height

Lok-Tite Brackets for storage racks provide correct ventilation, easy inspection for serial numbers, dates, and encourages good housekeeping practices. Make the most of your space by building sturdy low-cost storage racks with Lok-Tite Brackets. It's a perfect "do-it-yourself" project.

FIRE DEPARTMENTS USING LOK-TITE BRACKETS

Sacramento, California
Cape Elizabeth, Maine
Miami, Florida
Flint, Michigan
Philadelphia, Pennsylvania
Albany, New York
Corpus Christi, Texas
Louisville, Kentucky
Santa Fe, New Mexico
Portland, Oregon
Dayton, Ohio
Montreal, Quebec, Canada

Volunteer Departments:
Glen Avon Heights
Riverside, California
Beach Haven
Ocean City, New Jersey
Juneau, Alaska

W-B MANUFACTURING COMPANY
157 NORTH WACO STREET • WICHITA, KANSAS

MAIL COUPON TODAY

W. B. MANUFACTURING CO.
157 North Waco • Wichita, Kansas
Please send me ____ brackets @ $3.65.
NAME_____
STREET_____
CITY_____ STATE_____

- Simple to install
- Easy to adjust
- Big load support

What's Burning?

THE FOLLOWING LIST includes fires of $10,000 and over in the United States and Canada for the period from August 23rd to September 19th.

Huntsville, Ala.—Reproduction (printing) plant of Redstone Arsenal, including linotype machines and other printing equipment, destroyed.

Newport, Ark.—Radio Station KNDY heavily damaged.

Ward, Ark.—Four buildings including lodge hall, vacant dwelling and strawberry processing plant, destroyed.

Auburn, Calif.—Montgomery-Ward Store building damaged.

Fallen Leaf Lake, Calif.—Three summer dwellings damaged. Forest fire.

Oakland, Calif.—Apartment dwelling and stores destroyed.

Oakland, Calif.—Albers Milling Co. plant damaged. Explosion.

Pollock Pines, Calif.—Nielson Brothers Sawmill and two cottages destroyed.

Colorado Springs, Colo.—Last remaining building of Alexander Aircraft Co., destroyed.

Golden, Colo.—One of the main manufacturing buildings at Rocky Flats Atomic Plant, damaged. Spontaneous combustion.

Hartford, Conn.—Christie Hat Works damaged.

North Stonington, Conn.—Main manufacturing building of Holiday Charcoal Co. damaged.

Wilmington, Del.—Four buildings housing Standard Wallpaper & Paint Co., Diamond Chemical Co., Harris Pawn Shop and Danforth Drug Store, damaged. Chemical explosion.

Miami, Fla.—Marrs Aircraft Co. storage hanger destroyed.

Miami Beach, Fla.—Fruit Fair fruit shop, National Shirt Shop, Fleischer Sports Fashions, Bobby Scott apparel shop and Mart for Juniors clothing store, heavily damaged.

Rome, Ga.—Dairy barn at Berry Schools, erected 30 years ago by students, damaged.

Savannah, Ga.—Hinley Lumber & Supply Co. destroyed.

Burk, Idaho—Burk Supply Co. destroyed.

Coeur D'Alene, Idaho—Powell Building damaged.

Chicago, Ill.—Building housing Dave Brown Auto Painting, Inc. destroyed.

Chicago, Ill.—Storage shed of E. Filip, Cyclone Blow Pipe Co. and United Screw and Bolt Corp. damaged.

Chicago, Ill.—Quality Molding Co. damaged.

Harrisburg, Ill.—May Brick and Tile Co. damaged.

Salem, Ill.—Stewart Lumber Co. destroyed.

Indianapolis, Ind.—Burnet-Binford Lumber Co. damaged.

Indianapolis, Ind.—Two warehouses destroyed; third badly damaged.

Estherville, Iowa—Butterfield Produce Co. building damaged.

Fort Dodge, Iowa—Building housing restaurant, destroyed.

Manhattan, Kans.—East Waters Hall, a four-story building which was one of the main wings of the School of Agriculture at Kansas State College, destroyed.

Dayton, Ky.—Perry & Derrick Paint Co. warehouse destroyed; eight nearby dwellings and power lines damaged.

Louisville, Ky.—Paper storage warehouse of the *Louisville Times, Courier-Journal* and Standard Gravure Corp., damaged. Arson suspected.

Paducah, Ky.—West Kentucky Mattress Manufacturing Co. and Strickland Distributing Co. radio and television warehouse, destroyed.

Alexandria, La.—Louisiana Paper Co. plant and four nearby dwellings destroyed.

Chelsea, Mass.—Central Building and Wrecking Co., Segal and Ostrovite Co. lumber yard, White Lumber Co. and three apartment dwellings, destroyed.

Magnolia, Mass.—Guest lodge and health resort of Sol Feldman destroyed.

Revere, Mass.—Oak Park Island Bathhouse destroyed.

Warren, Mass.—Poultry battery building of Sun Valley Ranch Inc. and chicks of Tracht & Roche, destroyed.

Big Rapids, Mich.—Trainge Auto Sales Building, housing Ford Agency, destroyed.

Lansing, Mich.—Coral Gables ballroom and tavern destroyed.

Lapeer, Mich.—Dairy barn, milkhouse and silo on Lapeer State Home and Training School property destroyed.

Mount Clemens, Mich.—Catholic Church damaged.

Pinconning, Mich.—Pinconning Farm Bureau building and facilities destroyed.

Trenton, Mich.—Stockhouse Electric Shop, G & H Television Shop and Peter's Leather Goods Shop destroyed; B & W Furniture and Appliance Co. store damaged.

Missoula, Mont.—Intermountain Lumber Co. damaged. Electric motor spark.

Clinton, N. J.—Barn on Kurt Bierhoff farm destroyed. Lightning.

Ledgewood, N. J.—Silver Dollar Diner destroyed.

Plainfield, N. J.—Building housing Plainfield Glove Co., Electrical Device Mfg. Co., Madam Swazey Beauty Parlor and Craftsman Model Shop, damaged.

Albany, N. Y.—Block-long office and warehouse building heavily damaged. Explosion.

Farmingdale, N. Y.—Main dairy barn of New York State Agricultural School destroyed.

Saratoga Springs, N. Y.—Block-long frame public stable where 12 horses were housed, destroyed.

Boiling Springs, N. C.—Huggins-Curtis men's dormitory at Gardner-Webb Junior College, destroyed.

Statesville, N. C.—J. M. Ostwalt & Sons flour mill destroyed.

Akron, Ohio—Brown Derby Restaurant and Economy Loan Co. damaged.

Cleveland, Ohio—Avon Lake Theater, Saddle Inn Restaurant and Motel, Vanity Beauty Shop, Esquire Cleaners and Avon Lake Pastry Shop, damaged.

Columbus, Ohio—D'Asanio's Restaurant damaged. Arson.

Genoa, Ohio—Barn owned by Frank Emch destroyed.

Here's a break for hard-working firemen!

Dragon® Fire Pumps are designed with the fireman in mind...

1. They come completely assembled in a special carton. Just lift out the pump... fill with water... go into action!
2. The special Dragon harness is easy to get into and designed so the pump rides high where it can't throw the fireman off balance or interfere with walking.
3. Just a few easy strokes of the pump lever gives the operator a *continuous* flow of water he can direct right where it does the most good. And a mere twist of the shut-off nozzle gives either solid stream or spray *instantly*.
4. When he is using a Dragon Fire Pump, the fireman can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool.
5. There's no pump packing to dry out: even after standing idle for long periods, a Dragon Fire Pump is ready for instant use.

Yes, the way to boost firefighter efficiency and cut down fatigue is to specify Dragon Fire Pumps →

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

Dragon FIRE PUMPS

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

PARCO PRODUCTS COMPANY

PENNSBURG, PENNSYLVANIA

Georgetown, Ohio—P. Sullivan Shoe Co. destroyed; four nearby dwellings damaged.
Willard, Ohio—Willard Locker Plant damaged.
Oklahoma City, Okla.—Main assembly building of Aero Design and Engineering Co. at Tulakes Airport, destroyed.
Clatskanie, Ore.—Shepard Morse Lumber Mill destroyed.
Lebanon, Ore.—Snow Peak Logging Co. destroyed, Welding torch.
Portland, Ore.—Columbia Steel Casting Co. destroyed.
Yoncalla, Ore.—Yoncalla Theatre and Cafe destroyed.
Elizabethtown, Pa.—Barn at Masonic Home for the Aged destroyed.
Hollidaysburg, Pa.—Presbyterian Home damaged. Defective wiring.
Johnstown, Pa.—Barn, milkhouse and equipment on farm occupied by Peter Nitch, destroyed. Cigaret.
McKees Rocks, Pa.—Pittsburgh & Lake Erie Railroad's Storehouse C destroyed.
Monaca, Pa.—Kobuta chemical plant of Koppers Co. damaged. Explosion.
North Valley, Pa.—Thirty-room mansion owned by Townsend B. Young, heavily damaged. Lightning.
Sharon, Pa.—Paul Glenn Lumber Co. damaged.
Souderton, Pa.—His Nibs Shirt Corp. destroyed. Defective wiring.
Dallas, Tex.—Building housing McCormack & Yanouf Furniture Mfg. Co., Swim Shingle Co. rag and paper firm and Walker Roofing Service, destroyed.
Sherman, Tex.—Sherman Elementary School heavily damaged.
Ogden, Utah—Main plant and office of Ogden Troy Laundry destroyed.
Madison, Va.—Madison Flooring Co. damaged.
Norfolk, Va.—Storage building at Dr. Pepper King-Size Bottling Co. plant, together with 4,000 cases of soft drinks and a quantity of handling equipment, destroyed.
Yorktown, Va.—Pump control center at American Oil Co. refinery severely damaged.
Pomeroy, Wash.—Bratcher Farm Elevator destroyed.
Spokane, Wash.—Inland Empire Co. plant and warehouse destroyed. Locomotive sparks.
Spokane, Wash.—Washington Mill Work Lumber Co. damaged.
Tacoma, Wash.—300-ton fish carrier *Pacific Queen*, destroyed. Explosion.
Reedsburgh, Wis. — Six business places destroyed. Loss included a department store and auto firm.
Vancouver, B. C.—Electric Reduction Co. damaged. Explosion.
Peterborough, Ont.—Grain and feed mill owned by John Dewart destroyed.
Montreal, Que. — Three apartment dwelling units under construction at Notre Dame Gardens housing project, damaged. □□

Fireman Loses Suit

Walter J. Hauck, disabled Rochester, N. Y., fireman who was suing to recover $750,000 damages as the result of injuries suffered at a fire in 1953, lost the suit when a Supreme Court jury voted 10-2 for a no-cause verdict. Mr. Hauck's attorney moved immediately to have the verdict set aside but Justice Daniel J. O'Mara denied the motion. Hauck's attorney said he would file an appeal to the Appellate Division.

Hauck was permanently injured during a fire on July 3, 1953, when a wall collapsed and he was buried under the debris. He contended during the trial that a 32-ton steel sign and billboard was "carelessly and defectively" erected on the roof of the fire building and that its great weight contributed to the collapse of the building's wall. Since the accident Mr. Hauck has undergone 15 operations and is at present confined to braces and a wheelchair.

—Tom McCarthy

THEY LOOK ALIKE BUT THERE'S ONE IMPORTANT difference*

This violin cost $39.95 plus tax. It looks *exactly* like the violin shown below, but . . .

This violin — a genuine Guarnerius — would cost $2,700.00 — if you could buy one!

THE *SAFEST* INVESTMENT IS BI-LATERAL FIRE HOSE . . . IT COSTS *LESS* TO BUY THE BEST!

If you want *safety* AND *savings*, one way to be *sure* is to *look at the record!*

Bi-Lateral furnishes *FREE* hose record cards — send for your supply today.

*The important difference, of course, is *what you want to do with the instrument*. You wouldn't give a student a Guarnerius — nor a concert artist a beginner's instrument.

Here's a sample piece of fire hose — it looks just like the piece below — yet . . .

This fire hose is worth 10 times — maybe 1,000 times — as much!

Bi-Lateral hose is built *up* to a standard not *down* to a price! There's a *reason* for Bi-Lateral — it's to put out fires! It will prove to be your most *economical* purchase as well as your *safest* investment!

(Bi-Lateral *IS* cheaper *in the long run*. Hose record cards prove it! Send for yours . . . free.)

Bi-Lateral® FIRE HOSE CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

IN CANADA: Bi-Lateral Fire Hose, Kitchener, Ontario.

J. M. **BAKER**
CELLAR PIPE

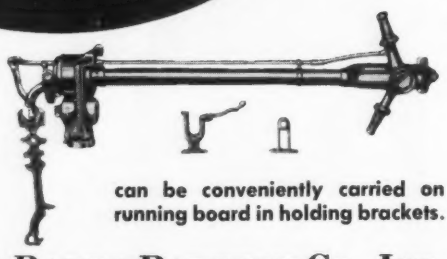
Model V—two stream universal can be equipped with our

fog or regular tips to knock down fume, gas or oil fires under docks, decks or other hard to get at spots. Every fire department should carry the Baker Cellar Pipe. Just push it through a hole and work the lever. Streams cover complete 360 degrees and cover up to 120 foot area.

see one in action

any interested group:—marine, municipal and industrial—can see one in operation. Just communicate with us or your fire equipment dealer. In the meantime—send for data.

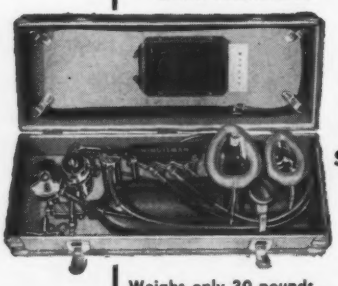
We welcome your inquiries.



can be conveniently carried on running board in holding brackets.

J. M. BAKER PATTERN CO., INC.
68 Sprague Street—Providence 7, R. I.

SAVE LIVES with
STEPHENSON "MINUTEMAN" RESUSCITATOR



Weighs only 30 pounds.

in all respiratory emergencies.

The "Minuteman" does more for the victim in cases of heart attack, smoke suffocation, electric shock, gas poisoning etc.

Simple Dependable Safe

Write for FREE demonstration or pamphlet F-408.

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Represented in Canada by Wilson & Cousins, Toronto

Questions and Answers

Multiple Choice Questions

Question: **When a soda and acid extinguisher will not operate when inverted, you should (a) shake it until it does; (b) lay it aside and inspect it later; (c) remove the cap and examine it.**

Answer: (b)

Question: **An open orifice of a 1½-inch line is less than that of a 3-inch line. What would be the most approximate difference? Explain.**

Answer: The area of a 1½-inch orifice is 1.7691 square inches. The area of a 3-inch orifice is 7.0686 square inches. The 3-inch orifice has therefore an area 5.3015 square inches greater than the 1½-inch orifice.

Question: **By doubling the nozzle pressure, the velocity is increased (a) two times; (b) three times; (c) four times; (d) five times.**

Answer: If the nozzle pressure is doubled, the velocity will be increased by 0.414 or less than 50 percent.

Incidentally, the velocity in feet per second equals $12.14 \times \sqrt{P}$, where P is the pressure in pounds per square inch.

Question: **It is safe to assume that poisonous fumes are present within a building when (a) chemicals are stored within; (b) the first three men to enter, collapse; (c) when white smoke is pouring from it; (d) when heavy black smoke is pouring from it.**

Answer: (b)

Position of Horn on Cap Badge

To the Editor:

In what position should the horn in a lieutenant's cap badge be: Horizontal or vertical? What is the basis for your answer? On the uniform badge the horns are vertical, but the popular position for the cap badge seems to be horizontal.

R. K. Y.

Answer: Reference to the available literature of uniform and badge manufacturers, as well as to rules and regulations governing the wearing of badges and uniforms of various departments, indicates that cap badges of lieutenants are worn with the single trumpet denoting the rank both in vertical and in horizontal positions.

Where the badge is round, the trumpet is customarily in vertical position, with the mouthpiece at the top. Where the badge is oval in shape, the trumpet is almost universally in horizontal position. The majority apparently prefer to have the bell to the left, the mouthpiece to the right, although some departments reverse this practice.

Placing Second-Alarm Companies

To the Editor:

Where it is necessary to sound a second alarm for additional apparatus, is it proper for the chief who ordered the second alarm to place the companies as they roll in, or should the company commanders select their own hydrants?

H.T.T.

Answer: The usual procedure where a chief officer in charge of a fire calls additional apparatus, insofar as assigning the apparatus upon arrival is concerned, is for the chief sending in the call to assign the companies responding to the locations he has selected for them.

A number of factors are involved in this decision. It is assumed that the officer in charge is fully informed as to the location of his first-alarm assignment, the conditions of water supply, and other essential details under which they are operating. If he does not, it might be poor judgment for him to place any companies responding on the multiple alarms until he has assurances that his choice of locations will be the most effective positions for fighting the fire. Many instances have been recorded where an incoming second-alarm company has taken the first unoccupied hydrant its officer could locate, then stretched in, only to find that there was insufficient water supply or that the unit was "robbing" companies nearer the fire of their essential supplies.

It is assumed further, that the officer in command of the fire has received reports from his aide, or other officers, where his other companies are placed and what the conditions are so that he may locate his reinforcements most strategically.

It is a general custom in municipal fire departments for companies rolling in on multiple alarms to stop their apparatus a block or more away (depending upon the layout of equipment already on the fire ground) and for the company officer to report in person to the officer in charge, receive his orders and then be governed accordingly.

An important factor in placement of fire forces today is fire department radio. It is becoming quite the custom for chief officers on the fire ground to direct incoming forces by radio just how to come in, where to hook up, stretch and operate on the fire, or to stand fast as the case may be.

Responding companies, radio-equipped, may be informed by fire headquarters of certain existing conditions that will govern their actions before they ever get near the fire ground. It is one of the attributes of modern two-way radio, both vehicular and portable on fire department frequencies, that a chief officer can maneuver and direct all his forces most effectively from his field headquarters location, without need of messengers or of his leaving his post. When so equipped a unit responding on additional alarms has no excuse for taking a wrong location, or for the officer in charge of the unit deciding for himself where he will locate and operate his force. □□

J. M. BAKER
fire fighting equipment

BAKER Universal TURRET PIPES

can be operated from turntable on apparatus or portable as a deck gun or can be carried as portable running board mounted. Ideal as a fixed turret on industrial hazards. Full 160 degree play with position lock. Available in 2-3 or 4 way siamese with automatic clapper valve.

for BIG streams

Either hand gear operated—complete with portable or fixed mounting. Fog tips available—send for data.

in fire service—only the Best is good enough.

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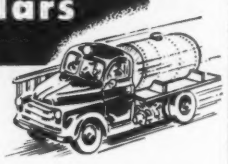
68 Sprague Street, Providence 7, R. I.

HARD TO PLEASE ?
deal with Halprin

LEADING BRANDS,
LARGE STOCK, LOWEST Price
SEND FOR CATALOG M-200

HALPRIN SUPPLY CO.
1355 South Flower St., Los Angeles 15, Calif.

Build your own fire truck for a few hundred dollars



The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 120 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

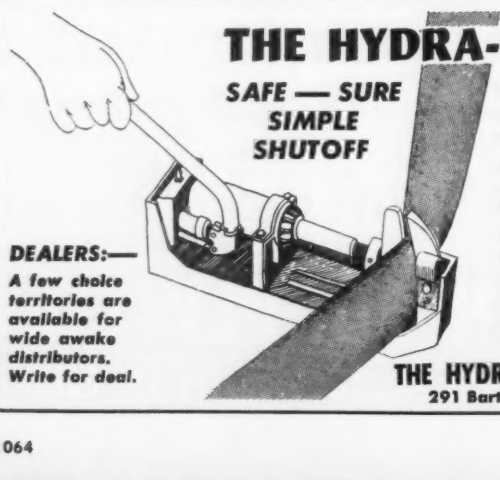
PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	20'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse, N.Y.

THE HYDRA-CLAMP



SAFE — SURE SIMPLE SHUTOFF

Will not slip on any surface or incline—will not "kick-back" — stops flow completely at 250 PSI—allows partial flow—WILL NOT DAMAGE HOSE! Clamps 1½-, 2½-, 3-inch hose. Carries easily—weight 22 lbs. Measures 4 x 4 x 14 inches. DATA ON REQUEST.

DEALERS:—
A few choice territories are available for wide awake distributors. Write for deal.

THE HYDRA-CLAMP COMPANY
291 Bartlett St., Manchester, N. H.

FIRE COLLEGES

Arizona State Fire Training School—Oct. 17-19, Phoenix. Director, Battalion Chief Jake Siken, Fire Fighting Instruction Supervisor, 49 South First Street, Phoenix, Ariz.

California Fire Training Officers' Workshop— May 19-23, 1958, Fresno, Cal. **California Arson and Fire Investigation Seminar—**June 16-20, 1958, University of California, Berkeley, Cal. For information, contact Thomas S. Ward, Supervisor of Fire Training, State Department of Education, 721 Capitol Avenue, Sacramento, Cal.

Kansas State Fire School—October 21-24, University of Kansas, Lawrence. Director, Clyde A. Babb, 111 Fraser Hall, University of Kansas, Lawrence, Kans.

Michigan Industrial Fire Control Seminar— Nov. 11-12, University of Michigan, Ann Arbor. For information, contact Francis A. Hartman, Supervisor, Firemanship Training Program, Extension Service, University of Michigan, 4524 Administration Building, Ann Arbor, Mich.

Morris County, N. J., Fire School—Nov. 12, Succasunna Fire Headquarters, Route 10, Succasunna; Dec. 3, Fire Headquarters, Budd Lake; Jan. 7, 1958, Madison Fire Headquarters, Madison; Feb. 4, Excelsior Fire Company, Montville. For information, contact Robert H. Wright, Publicity, Long Hill Lane, Chatham, N. J.

Coming Events

Oct. 16-18—Indiana Fire Chiefs Association. Annual meeting, Evansville, Ind. For information, contact the Evansville, Ind., Fire Department.

Oct. 21-25—National Safety Council. Forty-fifth National Safety Congress and Exposition, Chicago, Ill. Further information may be obtained from R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Avenue, Chicago 11, Ill.

Oct. 31-Nov. 2—International Rescue and First Aid Society. Annual meeting, Sheraton-Ten Eyck, Albany, N. Y. Executive Secretary, Max L. Spray, 101 North Alfred Street, Alexandria, Va.

College Sued Following Fire

James C. Jay, a student of Walla Walla, Wash., College, has filed suit for $43,707.38 damages against the school following an explosion and fire in which he charges he was painfully burned and his eyes injured.

Mr. Jay alleges in his complaint that he attempted to help put out a fire in a chemistry lab on February 10, 1957, only to find that the extinguisher on the wall was empty.

Jay said that while working on an experiment in the analytical lab of the chemistry building he heard an explosion in the organic chemical lab and went to help put out the fire. The complaint alleges that another explosion occurred when he was unable to use the extinguisher.

He accuses the college of negligence in not keeping the extinguisher filled.

Frank A. Maddux

KOBUTA FIRE

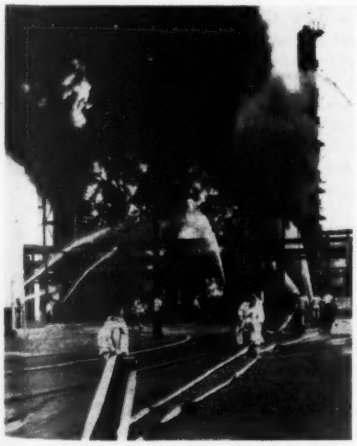
Continued from page 1038

the St. Joseph Lead Company and the Kaiser Aluminum Company also was made available. Monaca had its aerial ladder early on the ground and this was used to good effect, with powerful ladder pipe streams and fog.

Radio-equipped vehicles of the Potter Township Department served as communications centers. In addition to these, the regular Koppers' Fire Brigade was joined by trained plant auxiliary fire fighters and service men—all specialists in the field of fighting the types of fires peculiar to the Koppers' installation. State Police were active in handling the curious and clearing the way for responding fire forces. The plant fire brigade, headed by Chief George Prince, has its own fire station, with three pieces of apparatus: a 1,500 Mack and two 500 gpm pumpers on Ford chassis with full equipment. It operates four shifts, each of six to eight men per squad. Within a two-mile area are 20 trained auxiliary fire fighters and in addition, special maintenance and service men, all of whom are trained in fire fighting, and all of whom took part in this action.

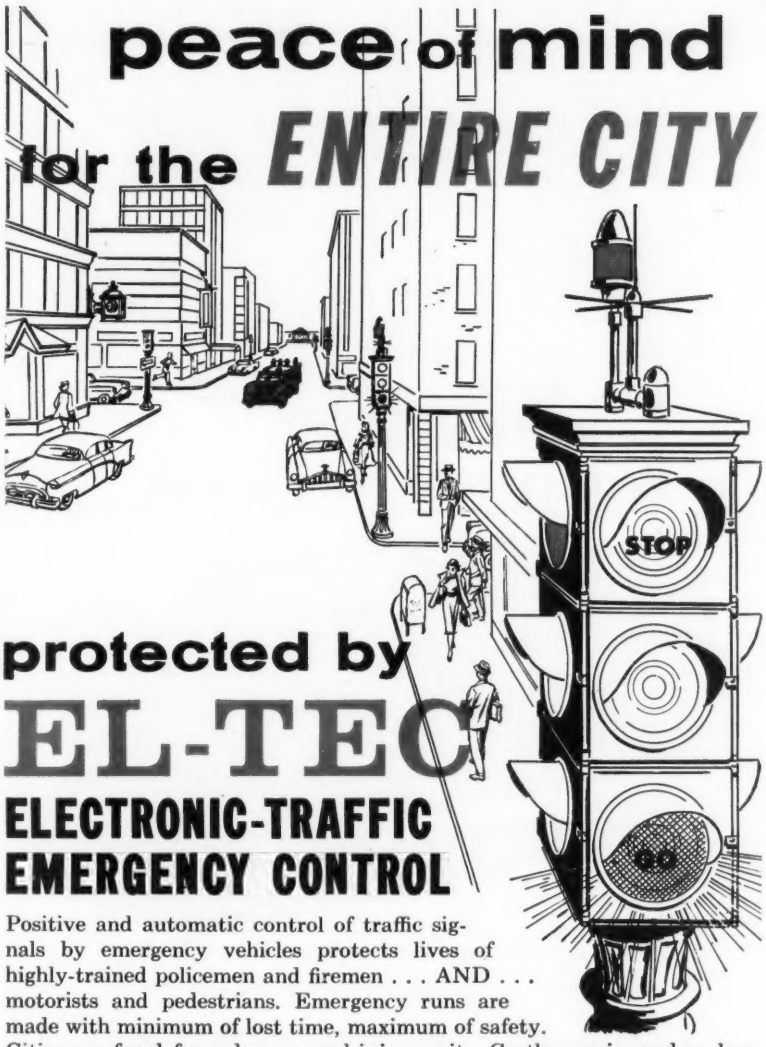
The rapid mobilization of fire forces quickly subdued the remaining fire and effectively prevented any involvement of hazardous exposures. In this they were aided by two factors: The speed with which the plant operations were shut down in the area involved immediately following the initial explosion, and the extensive water supply system maintained by the company, which draws from the Ohio River, three miles downstream from Monaca. At the peak of the operation over 40,000 gpm were being thrown upon the fire and exposures.

This was reported to be the third serious explosion at the vast chemical plant. Two men were burned in 1949 and in 1951 a similar explosion and fire caused estimated damage of $500,000. It is said the losses to the company in the most recent incident may reach $850,000. □□



Firemen stretch in to confine Koppers raging fire. Plant brigade aided by volunteers use thousands of feet of hose and Niagaras of water to prevent involvement of huge Kobuta plant

peace of mind for the ENTIRE CITY



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ELECTRONIC-TRAFFIC EMERGENCY CONTROL

Positive and automatic control of traffic signals by emergency vehicles protects lives of highly-trained policemen and firemen . . . AND . . . motorists and pedestrians. Emergency runs are made with minimum of lost time, maximum of safety. Cities are freed from damage and injury suits. Costly repairs and replacements of wrecked equipment are eliminated. Insurance rates are lower.

EL-TEC's UHF radio traffic controllers are infallibly dependable . . . easy, inexpensive to install and maintain by local radio technicians . . . simple to operate. No wires. No cables. No modification of existing traffic controllers.

Such cities as Jackson, Mich., New Haven, Conn., Maywood, Ill., Baltimore, Md., Newark, N.J., Ogden, Utah, and Havana, Cuba, and many others are EL-TEC-equipped.

WRITE FOR DEMONSTRATION An EL-TEC portable demonstrator can come to your city and show you how EL-TEC works. Write today for an appointment.

Good News for Traffic Engineers: RADIO INTERCONNECTION

EL-TEC can provide radio control for precision synchronization and other programming functions. Write for further details—advise your requirements.

Electronic Protection Inc.

Subsidiary of Standard Coil Products Co. Inc.

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The Only FCC Type Approved System for Emergency Traffic Control

THE FIRST CALL...

Will prove its Value!

All compartments open from inside or outside for fast accessibility . . . custom designed to fit your truck!

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STEEL FABRICATORS, Inc.

SHARPSVILLE, PA.

BUILDERS OF SERVICE, CRASH AND LADDER TRUCKS • VOLUME AND HIGH-PRESSURE PUMPERS • SQUAD AND EMERGENCY CARS • STORAGE TANKS

Porto-RAK

The fast, modern way to handle, store and load hose.

HOSE STORAGE AND LOADING UNIT

Saves time — Saves space

Holds 1800 feet of 2½" hose and proportionately more 1½" hose in an 8½' space (loading table detached). Easy, convenient to use. Roll it right up to the truck for complete hose reload—out of the way when not in use. Equipped with locking fiber-wheeled casters.

WRITE FOR FOLDER

THE CIRCUL-AIR CORPORATION

575 East Milwaukee, Detroit 2, Mich.

SOUND SYSTEM

Continued from page 1039

has proved its worth in the reporting of still alarms, the issuance of bulletins to the stations involved concerning traffic and weather conditions, and a varied interchange of information which requires immediate transmittal. The captain in each firehouse, together with the man on watch, makes regular use of the microphones at hand, both for communication with personnel at the local station, and the exchange of information and data with the other stations in the hookup, and with police headquarters.

A control console installed in the watch room at each location contains both preamplifiers and power amplifiers, together with controls permitting volume adjustments. The microphones in use are of the "close-talk" type.

Both fire and police officials of West Orange regard the interstation paging system as a decided asset in the protection of an area which embraces numerous homes, country clubs, schools, business structures and public buildings.

Credit for the original conception goes to Assistant Chief Albert Ehlert. The layout and sound system specifications required to implement Chief Ehlert's plan were executed by Douglas L. McLean, sales engineer, eastern division office, Altec Service Company. Technical supervision of the installation was provided by Altec's field engineer, S. P. McGuigan.

Bert Evans

Montana Chiefs Workshop

The Montana Department of Industrial Education of the Superintendent of Public Instruction Office conducted a Fire Chiefs Workshop in Helena on September 11, with 35 chief officers from 11 paid and 13 volunteer fire departments in attendance.

The board of directors of the Montana State Fire Chiefs' Association held a meeting in conjunction with the workshop. A resolution was passed complimenting the state educational office for developing the program for professional advancement of the state fire service, of which the workshop was a part. In addition the board accepted the invitation of the City of Livingston to hold the 1958 annual conference of the Association there on June 12, 13 and 14.

New York Hotel Will House Fire Station

A new 28 story, 850 room hotel to be constructed at Third Avenue and East 51st Street in Manhattan will also be the quarters for a new fire and police station. The site at present contains an 80-year-old police precinct station and a 92-year-old fire station.

Under present plans the building will provide quarters for Engine 8, Hook and Ladder 2 and the 17th Police precinct. The city will pay an annual rental of $141,000 for the novel arrangement.

OPERATION "PIGGYBACK"

Continued from page 1037

tation to do a bit of research on these possible drawbacks and prepare their response plans accordingly.

Finally, any plan for possible piggyback operations must take into consideration certain other factors such as the length of time it will take for the railroad to locate the necessary freight cars and locomotives to do the hauling, the question of facilities for assembling and catering to the fire crews and so on. This is another reason why any plans for utilizing the railroads in time of emergency must be worked out with the representatives of the railroads themselves, as well as CD authorities.

"Operation Submarine Base" definitely proved that piggyback emergency transportation is entirely practical and possible where there is cooperation between all teams. □□

The editors acknowledge with thanks the cooperation of the following in the preparation of this report: Fire Chiefs Thomas Collins, New Haven; Leno Viscovi, U. S. Naval Submarine Base, New London; the New York, New Haven & Hartford Railroad, and the State Office of Civil Defense, Hartford, Conn. Photographs used to illustrate the article were furnished by The New Haven Register.

Illinois Fire Protection Survey

German Gurfinkel, Civil Engineer, recently conducted a fire protection survey in the State of Illinois, in connection with a study of the problems confronting urban and suburban areas as today's population growth strains available facilities.

Fire officials in 31 cities ranging in size from less than 10,000 to more than 50,000 population were queried. Of these, 22 were in the 10,000 to more than 50,000 population group and 19 of those studied had suburbs with additional populations of from 2,000 to 10,000 people.

Fire protection is furnished to the outlying areas by 56 per cent of the cities questioned and fire districts protected 18 per cent. Volunteer action was reported in only one case. Payment for the services was by taxation or by service charges in 48 per cent of the suburbs. No charge was made in two cases and three departments provided assistance on a mutual aid basis.

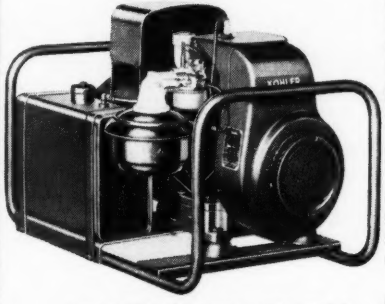
Water distribution systems covered 10 suburbs completely and eight enjoyed partial such protection. Hydrant spacing averaged between 400 and 800 feet. Water pressure available averaged between 40 and 80 psi and was judged to be satisfactory for fire fighting purposes in all cases.

The only method of reporting a fire according to 28 fire chiefs who answered the question, was by telephone. These same chiefs stated that between three to five minutes were required to reach a fire in the center of the outlying areas.

KOHLER ELECTRIC PLANTS

Sedgwick County Fire Department rescue truck, Wichita, Kansas.

Portable power—top performance for rescue trucks, fire fighting tools, civil defense



Model 2.5M25, *2500 watts, 115 volt AC. Manual starting.*

Kohler Co., Kohler, Wisconsin
Established 1873

Smooth-running reliability has made Kohler electric plants the choice for rescue operations and fire fighting equipment the country over. Compact, portable models are used for floodlights, resuscitators, smoke eradicators, portable iron lungs, and power tools. The 2500 watt model shown has 4 receptacles, pilot light, carrying frame. Rubber-tired hand cart available. Other sizes, 500 watts to 50 KW, include stand-by models to maintain sirens, alarm signals, communications, during power failures.

For civil defense, Kohler plants operate floodlights, sound amplifiers, power tools, X-ray units for mobile hospitals. Larger sizes for air-raid sirens. Stand-by models for panic or evacuation centers. Write for folder 10-F.

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

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Five distinctive designs "Scotch Lited"

CHELMSFORD FIRE DEPT.

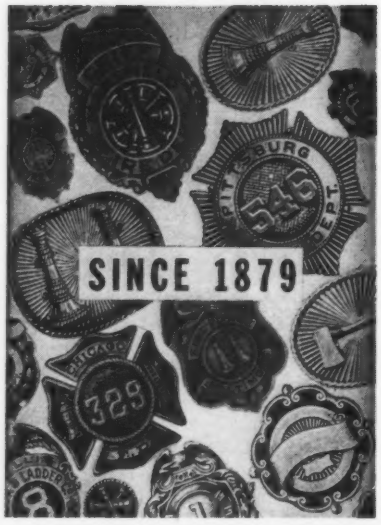
PORT WASHINGTON FIRE DEPT.

ALBANY FIRE DEPT.

Made on heavy aluminum plate. They are durable, readable, will outwear your car, and will stay reflective. Made for all officers and a host of other standard bases.

See your dealer or write to

PACIFIC REFLEX SIGNS BOX 323, McMINNVILLE, OREGON



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Better today than ever before in our 78 years of fine badge making—better through employment of latest techniques plus greater experience. We offer the widest selection of badge designs—all available in a wealth of excellent materials. Any badge you want can be had in nickel, chromium, rhodium, sterling silver, gold plate, perma-glo, gold filled and 14 kt gold.

There is no substitute for top quality and experience and you get both at Braxmar.

Send for new price list on badges illustrated in our Diamond Jubilee Catalog.

THE C. G. BRAXMAR CO., INC.
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216 East 45th Street
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THE WATCH DESK

overhauling the firemanic news of the day

Burned by Desire

Alfred Miller, Newark, N. J., has tried three times in the past ten years to become a fireman. He failed the written exam' twice and the physical on his third attempt.

During a recent wave of false alarms from downtown Newark boxes—20 in the month of August—firemen and police have been on special alert for offenders. Well, their vigilance paid off. Early one morning, Miller was nabbed in the very act of turning in a false alarm and was sentenced to six months in jail. Still pending against him is a charge of parole violation. It seems he was on probation for three years after being accused in county court of arson.

Truck Sought As "Fire Bug"

Connecticut and Rhode Island police recently were searching for a diesel truck believed responsible for starting 29 fires along Connecticut Route 165 and Rhode Island Route 3.

The blazes broke out on August 22, 1957. The most serious was in the Hopeville Point State Forest in Connecticut where 40 acres were destroyed.

Police believe the fires were started by carbon sparks thrown off by the truck.

Beer—For Class B Blazes

This is the way the report read in the records of the fire department of Comstock, Mich—near Kalamazoo:

"Oil from a leak in the furnace in the basement of the E & H beverage store caught fire yesterday.

"The flames followed a stream of oil to a stack of beer cases.

"The 12 wooden cases caught fire.

"The bottles exploded.

"Spraying beer put out the fire."

L. A. Ladder Gets Balloon Barrage; Boy Gets Gate!

A municipal court judge has literally "lowered the boom" on an 18-year-old Los Angeles area boy who threw a water-filled balloon at a L.A. City fire truck responding to an alarm recently.

Judge Frank D. Parent sentenced the youth to 29 days in the County Jail after the boy pleaded guilty to the felony charge in Inglewood Municipal Court.

The apparatus from Station 5 in the Westchester District was rolling through county territory at Sepulveda Boulevard and Playa Street when the balloon was thrown.

—Cliff Dektar

Good Stop—In Fire Station

Fire Chief Charles Spreter, two paid men and one volunteer of the Dayton, Ky., Fire Department, sleeping in the fire station, were rudely awakened at 4:30 a.m. one morning recently by a neighbor pounding on the firehouse door. They were all the more confused when they learned the "verbal" alarm was for their own fire station.

Fire had originated from some undisclosed cause in the hose tower of the building housing the fire department and other city offices. Quick-acting firemen managed to run all apparatus out of the building, and Chief Spreter then directed his men in preventing complete destruction of the structure. It took about one hour for the firemen, including 24 volunteers who responded, to extinguish the flames which had spread to the attic.

Damage to the building amounted to about $1,000; none of the city's offices was damaged. Damage to hose in the tower was not given at the time of the report, pending tests to determine its fitness.

—Pat Holz

Vamps Wash Man Into Court

From Norwalk, Wis., via Hugh Walker, comes an item about one Robert K. Heim, railroad brakeman, who was washed right into court when he objected vehemently to his involuntary role in a local fire drill.

Brakeman Heim was standing on the railroad tracks between the Norwalk Creamery and a clump of bushes when the firemen, on the other side of the bushes, charged in with their charged line, in a mock assault upon a pretended fire at the creamery.

An unsuspecting participant in the "wet drill," the drenched brakeman, afire with rage, in turn charged through the bushes and waded into the volunteers, raining blows upon them right and left.

The irate brakie was "dampened down" by the vamps—and police who carted him off and haled him into court charged with disorderly conduct.

Deponent saith not what fine Heim was charged.

Mouse-Trapped on Mouse Hunt

Mouse-trapped a half-hour in a 35-foot well on his property, while attempting to remove a dead field mouse from his drinking water supply, George L. Stafford of Trumbull, Conn., was pulled to safety by firemen on July 23. He was taken to Bridgeport Hospital for treatment for shock and bruises.

Mr. Stafford, stocky, 5 feet, 9 inches, met with the accident while trying to descend into the well by means of two

ladders tied together. According to Mrs. Stafford, he had neglected to moor the top ladder to a tree, as was his custom when fielding well-going mice.

As he started down, the unsteady ladders separated, pitching him to the bottom. Because of the drought, the 4-foot-wide well held little more than a foot of water. When Trumbull fire fighters arrived they employed a stouter ladder than those which had let Mr. Stafford down, lowered a rope and hoisted him to ground-level. Trumbull firemen participating in the rescue, under direction of Chief Lester Knecht, were Joseph Heneghan, George Knecht, William Kern and James McGrath.

Tom Magner

Fire Fighters Burned Up

For a little while, please don't remind the Harrisonburg Fire Department of Harrisonburg, Va., about this.

When Hose Company 4 of that department wended its way homeward (we don't know by what means) on September 2 after fighting a grass fire, they were more than red-faced. They were plenty burned up. So was their $15,000 fire truck.

The members of the hose company reported that the grass fire which they were battling about five miles out of town, spread more rapidly than they had expected—which happens to many and many a fire outfit.

But when the lads endeavored to move their apparatus to safety, it got all tangled up in a ravine and fell prey to the flames.

Rescued Steeplejack Angry

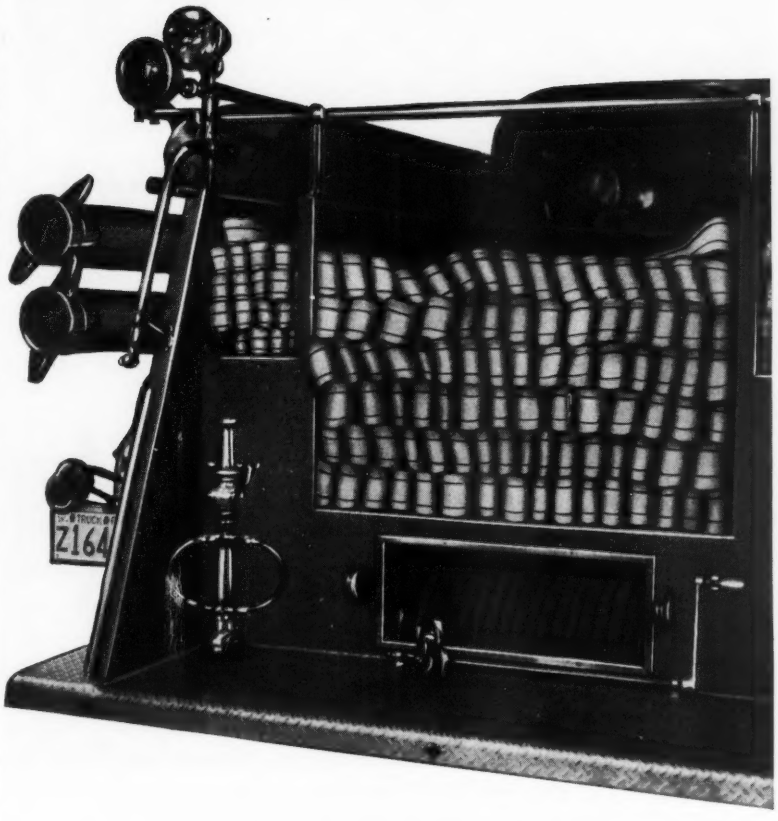
On June 28, District of Columbia firemen rescued a 66-year-old steeplejack who had dangled head-down from a dizzy height for 90 minutes when strong winds flipped him over and fouled his rigging. At the time of the accident his partner was hoisting him up the smoke stack of a warehouse in preparation for a painting job.

Mike Brummett came down from the 80-foot stack "cussing up a breeze" because his rescuers cut his ropes. "Now I can't go back to work until tomorrow," he said.

Long Distance False Alarm

Gordon L. Harwell, a retired business executive in Houston, Tex., was piqued at his son-in-law and daughter who live in Denver, Colo. He long-distanced a 1100-mile false alarm to the Denver Fire Headquarters on July 7, sending the fire apparatus to his daughter's home.

Harwell telephoned Fire Chief Feldman the next day and apologized. He told Houston reporters that he would contribute $5,000 to the Denver Firemen's Fund. Nevertheless, on July 9 a warrant for his arrest was issued in Denver. Harwell will have to appear personally to be served, as the warrant does not allow extradition. □□



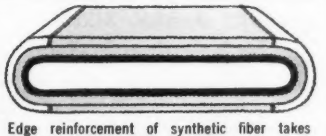
New Tuff-Edge® Hose defeats wear at the folds, where most failures begin

Here's a lighter weight, more flexible fire hose that stands up under the worst punishment of all—constant folding and unfolding! Longer life is built right in to Delaware Brand TUFF-EDGE HOSE by Quaker.

Reinforcement of the vital fold edges by 100% polyester filament gives TUFF-EDGE HOSE new high resistance to flexing, faster drying in folds and creases (where mildew formerly could start), maximum flexibility for more compact loading and racking.

TUFF-EDGE HOSE, testing at 600 lbs., is 15% lighter, 50% stronger than former high-quality cotton-jacket hose. Available in 50-foot lengths, in 1½" and 2½" diameters.

For complete information, write H. K. Porter Company, Inc.; Quaker Rubber Works, Philadelphia 24, Pa.; or Pioneer Works, Pittsburg, Calif.

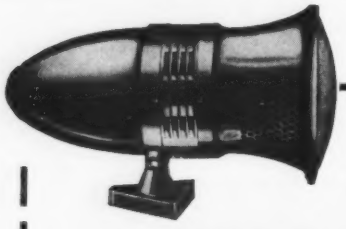


Edge reinforcement of synthetic fiber takes repeated folding without failure, dries fast, reduces weight, saves storage space. Patent applied for.

H. K. PORTER COMPANY, INC.

QUAKER RUBBER DIVISION

DON'T SPECULATE-
...STEP UP
YOUR EFFICIENCY!
The occelerated tempo of modern times demands modern techniques plus stepped-up efficiency. Fire departments everywhere find the Super Vacuum Smoke Ejector provides the extra margin of efficiency necessary in modern day fire fighting. New and revolutionary in design, Super Vacuum will outperform other fans twice its size... gives the positive, controlled ventilation essential to the prompt, efficient control of fires.
CONTROL VENTILATION
...CONTROL FIRES!
The heart of the SUPER VACUUM Smoke Ejector is the patented propeller. Conventional fans produce a chopping, recirculating action. In contrast, the SUPER VACUUM propeller is a perfect spiral air screw which creates a vacuum...suction is created over the entire face of the propeller and the air or smoke is discharged in a high velocity spiral. There are no dead spots.
THE HEART OF THE SUPER VACUUM
WRITE FOR ADDITIONAL INFORMATION OR CONTACT YOUR LOCAL FIRE EQUIPMENT DEALER
MANUFACTURED BY
Super Vacuum MANUFACTURING CO.
319½ E. 17th Ave., Denver 3, Colorado INC.



MODEL 20 SIRENLITE
for Emergency Vehicles

Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

STERLING SIRENS

- HANDSOME
- RUGGED
- RELIABLE

Built by proud craftsmen to the highest standards of precision manufacturing . . . utilizing materials of finest quality . . . Sterling Sirens give year-after-year of unsurpassed dependability and satisfaction.

MODEL 20 SIRENLITE
FIRE ALARM SIREN
for Volunteer Systems

Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.

Complete line of Siren Equipment • *Bulletin on Request*

THE STERLING SIREN FIRE ALARM CO., INC.
10 BARTLETT ST., ROCHESTER 8, N. Y.

MANUFACTURERS' NEWS

Continued from page 1048

Bendix Promotions

Gilbert D. Doroff has been promoted to national sales manager, mobile products, Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. Frank R. Viafora will replace Doroff as midwest regional manager with offices in Chicago, it is announced by Norman Caplan, mobile products manager.

New Werner Appointment

William H. Peters has joined the staff of the R. D. Werner Co., Inc., 295 Fifth Avenue, New York, N. Y., manufacturers of aluminum ladders and staging as

products division manager, it is announced by R. D. Werner, president. He will headquarter in the New York sales office and direct the company's sales in the national market.

American LaFrance Promotions

American LaFrance Corporation announces the appointment of two new district sales and service managers.

Charles Cizek has been appointed manager of the Chicago, Ill., district office to succeed the late Earl C. Watson. He has been associated with American LaFrance for over 40 years and previously was assistant to Mr. Watson.

Richard A. Hurley has been appointed manager for the New York district with headquarters at Long Island City. He succeeds C. W. Weilert. Mr. Hurley has been associated with American LaFrance for several years in the State of Ohio.

FEMA Safety Code Bulletin

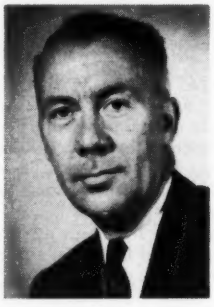
A new safety code covering "Inspection, Maintenance and Protection of Standpipe and Inside Hose Systems" is now available without cost from the Fire Equipment Manufacturers' Association, Inc., One Gateway Center, Pittsburgh 22, Pa.

The eight-page booklet reviews the various services performed by a standpipe and inside hose system. Specific guidance is provided for periodic inspection as well as instructions for maintenance of hose, couplings and nozzles.

Ward LaFrance Promotions

John F. Dando has been promoted to general sales manager, Ward LaFrance Truck Corporation. He was formerly manager of the new products division of the company.

John F. Dando

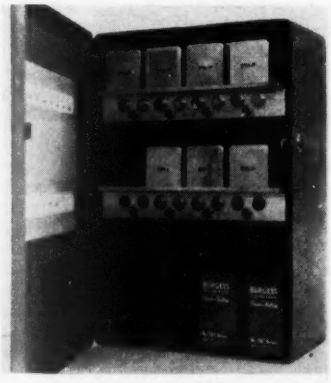


Benjamin W. Lewis

Benjamin W. Lewis has been named fire apparatus sales manager and will move his offices to the executive headquarters in Elmira, New York. He was formerly sales manager of the New York branch of the company.

The appointments were announced by F. N. Tracy, president of the firm.

Proprietary Control Panel



The Notifier Corporation, 239 South 11th Street, Lincoln 8, Neb., has introduced a proprietary control panel as part of its new line.

Called "Du-O-Matic" the unit is in-

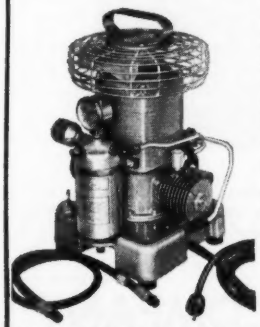
From one chief to another . . .

CHIEF F. TED BECKER
MONROVIA, CALIFORNIA, SAYS:

"The Cornelius high pressure air compressor is the most valuable piece of up-to-date equipment we have purchased."

Chief Becker continues: *"In October, 1956, we placed in service a Cornelius high pressure air compressor Model 130R1500. It has proven to be the answer to our air supply problem. Since placing our Cornelius compressor in service it has become second nature to don the air masks at emergencies and allow frequent drills which has instilled confidence in the men.*

"Its simplicity of operation, its portability for use anywhere, its precision construction, and its ability to replenish our air supply as needed makes it the most valuable piece of up-to-date equipment which we have purchased."



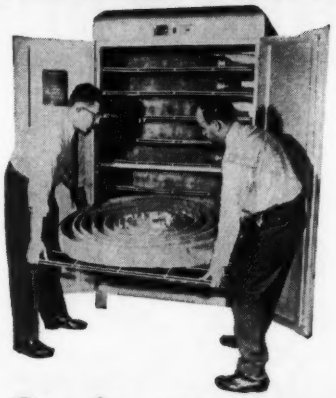
Model 130R1500 (3000 PSI)

Be sure the men in your department have the protection and confidence inspired by an abundance of pure, fresh air supplied by a Cornelius compressor. Write today for FREE catalog or call your equipment distributor for a demonstration.

THE *Cornelius* COMPANY

550 39th Avenue N.E., Minneapolis 21, Minnesota

Better Hose Care-with CIRCUL-AIR
HOSE CONDITIONING EQUIPMENT
WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS



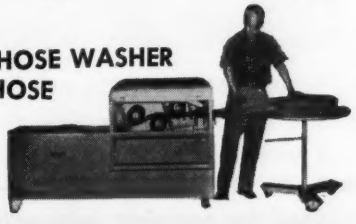
FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast—so economical—so easy to use. Circul-Air is the preferred drying method in over 4,000 leading Fire Departments.

LABORATORIES APPROVED

Roto-Jet **AUTOMATIC FIRE HOSE WASHER**
WASHES—RINSES—DRAINS HOSE

Washes, Rinses, Drains hose thoroughly and quickly. Simple, one-man operation. Ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life. ***WRITE FOR FOLDER***

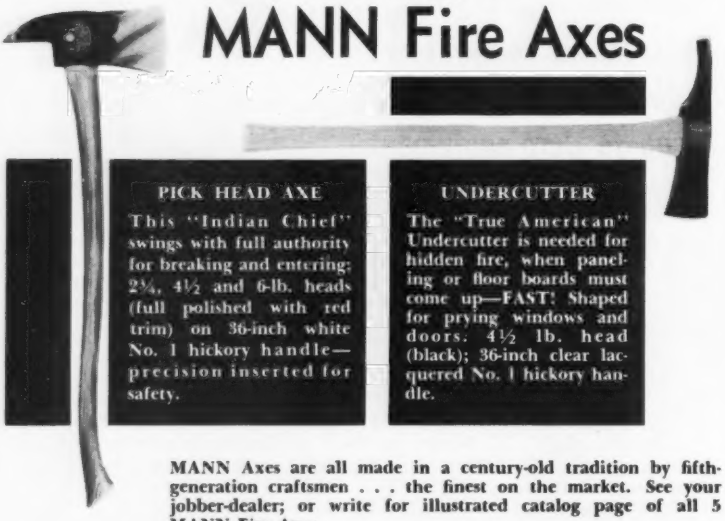


THE CIRCUL-AIR CORPORATION
575 EAST MILWAUKEE
DETROIT 2, MICHIGAN

Only the best is "good enough" . . . in an emergency!

That's why tens of thousands of firemen—for more than a century—have demanded . . .

MANN Fire Axes



PICK HEAD AXE

This "Indian Chief" swings with full authority for breaking and entering; 2¾, 4½ and 6-lb. heads (full polished with red trim) on 36-inch white No. 1 hickory handle—precision inserted for safety.

UNDERCUTTER

The "True American" Undercutter is needed for hidden fire, when paneling or floor boards must come up—FAST! Shaped for prying windows and doors. 4½ lb. head (black); 36-inch clear lacquered No. 1 hickory handle.

MANN Axes are all made in a century-old tradition by fifth-generation craftsmen . . . the finest on the market. See your jobber-dealer; or write for illustrated catalog page of all 5 MANN Fire Axes.

MANN EDGE TOOL COMPANY

Lewistown 4, Pennsylvania

Eastman 3 way DELUGE GUN

NEW DIRECTIONAL HAND WHEEL CONTROL

The NEW HAND WHEEL CONTROL enables one man to operate the gun.

It will hold in any position.

EASY TO OPERATE — STURDY — SAFE

Send for complete information

SAMUEL EASTMAN CO., INC.

CONCORD, NEW HAMPSHIRE

tended for installation at the protected property to serve as the nerve center of fire detection and sprinkler supervisory equipment. Signals are transmitted over supervised direct lines to a remote station receiving panel.

New Carbon Dioxide Systems

Packaged carbon dioxide fire extinguishing systems for industrial spaces containing normal flammable liquids have been announced by Walter Kidde & Company, Inc., Belleville, N. J. These systems are available in sizes ranging from 10 to 300 pounds.

The packages contain all the components needed to install an automatic system which will protect rooms from 140 to 6000 cubic feet. One or more carbon dioxide cylinders, rate-of-temperature-rise fire detectors with connector tubing, automatic control and discharge heads with a manual actuating device, Multijet discharge nozzles, cylinder supporting frame, and instructions are included. Pipe and fittings for each size system, packaged in individual boxes, as well as accessory items, can be ordered separately.

Keystone Valve Bulletin

The Keystone Valve Corp., 5325 Kirby Drive, Houston 5, Tex., has published Bulletin F-57 which describes its quarter-turn hydrant valve.

Illustrated in three colors, the bulletin gives engineering data and suggested uses for the valve when used in various pumper hook-ups.

El-Tec Sets Sales Network

A nationwide sales network for a FCDA-approved electronic traffic control device is announced by V. Lee Cook, president of Electronic Protection Inc., Melrose Park, Ill., subsidiary of Standard Coil Products, Inc.

The new product is designed to provide control of traffic signals from a centrally located UHF radio transmitter which sends microwave impulses to radio receivers in the intersection signal light boxes. It provides push-button control for community evacuation or other emergency as well as normal traffic patterns.

The El-Tec agents will be located in Connecticut, New Jersey, Virginia, Illinois, Colorado, California, Maryland, Florida, Indiana and Texas.

Homelite Advances Thompson

J. Allan Abbott, president of Homelite, a division of Textron Inc., announces the appointment of Nelson Thompson to the newly created position of executive vice president. Mr. Thompson has been vice president, sales, since 1941.

Blackhawk Promotes Kiley

Wesley J. Kiley, marketing manager of Blackhawk Mfg. Co., has been named manager of the firm's Distributor Sales Division.

G. H. Goehrig, vice president in charge of sales, said Kiley would succeed W. V. Dyke, who is entering the trade publication field.

Quaker Appoints Gorman

Appointment of Thomas J. Gorman, director of purchases, Quaker Rubber Division, H. K. Porter Company, Philadelphia 24, Pa., is announced by George A. Dauphinais, vice president and general manager.

Mr. Gorman has been with Quaker since 1939; for the past 10 years he has been chief chemist. He is a graduate of La Salle College, Philadelphia; and is a member of the American Chemical Society and the Philadelphia Rubber Group.

Mr. Gorman's duties as director of purchases will include supervision of all purchases for Quaker Rubber Division including Quaker Rubber Works in Philadelphia, Pa., and the Quaker Pioneer Works in Pittsburg, California. □□

For VALUE . . .

Specify HALE

Why do users of Hale Fire Pumps specify "Hale Pump" when they buy new apparatus?

Because these men have learned through practical experience HALE VALUE in terms of:

• Dependability • Flexible Performance • Efficiency

For 42 years Hale-equipped Fire Pumpers have upheld a high standard of dependability . . . a dependability that has won the respect of users all over the world. **Hale Fire Pumps are sold only through Manufacturers of Quality Apparatus.**

FEATURES

- **Completely Modern**
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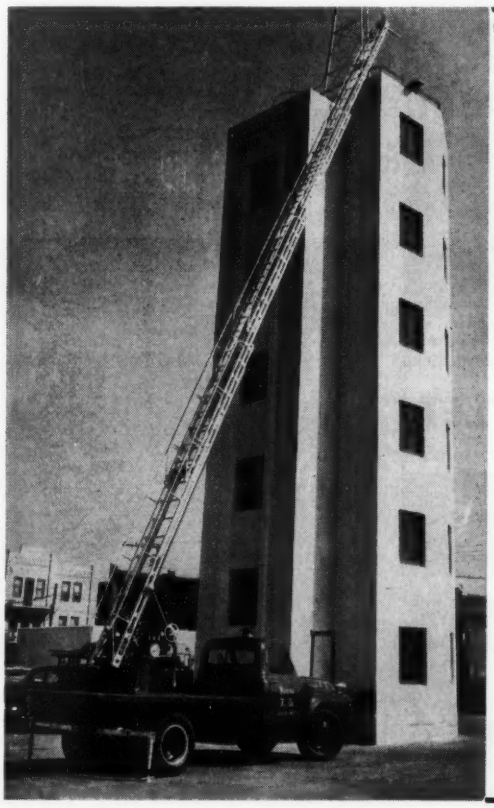
Write today for NEW FOLDERS on Hale Fire Pumps . . . built in all standard capacities.

HALE
FIRE PUMP COMPANY
CONSHOHOCKEN, PA.



MEMCO AERIAL LADDER

This picture shows the McAlpine Drill Tower (Oklahoma City, Oklahoma) which is full six stories in height. Note how this 65 foot MEMCO AERIAL LADDER would make it possible for the men in your Department to fight fires the modern way—from above, *and* the MEMCO AERIAL LADDER will serve equally well in rescue work.

The MEMCO AERIAL LADDER can be mounted on a truck you already have in service, on a commercial chassis, or it can be built into a new combination apparatus by your fire truck manufacturer.

Available in 50 and 65 ft. lengths.

Write for full details TODAY.

MEMCO AERIAL LADDER CO.
1007 N. W. 36th Street
Oklahoma City 18, Oklahoma

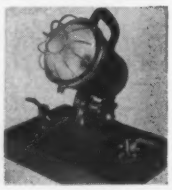
CIRCLE LIGHTS-

No. 150 High Intensity Flood
R-40, 200, 300, or 500 Watts.

The Choice of FIRE DEPARTMENTS BECAUSE—

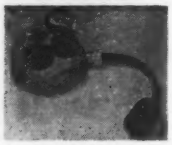
THEY'RE COMPACT IN SIZE—EASY TO CARRY — ONLY 6 lbs. WEATHERPROOF — SEALED BEAM FLOOD OR SPOT—WIDE BASE WON'T TIP — CAST ALUMINUM CONSTRUCTION — CORD WON'T PULL OUT—SEALED AGAINST MOISTURE — BULB CUSHIONED AGAINST SHOCK—RESISTS ABUSE—SURE-LOCK ELEVATION ADJUSTMENT — CIRCLE-D WEATHERPROOF LAMP.

CIRCLE-D-Quick Release Hold Down Clamps—

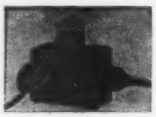


For mounting Portable Lights on vehicles etc., Quick Release Hold Down Clamps, hold firm, yet permit quick release when needed. Solid bronze chrome plated.

CIRCLE-D OUTLET BOXES.



3 outlet box



4 outlet box with pilot light.

Boxes provide 3 or 4 20A outlets from single feed line. Twist lock connections, completely weatherproof.

write for complete data . . .

NATALE MACHINE & TOOL CO.

339 Highway 17 Carlstadt, N. J.

New York Fire College Sets Up New Training Unit

To maintain the uniformed force at its present authorized strength of more than 12,000 men and provide for increases in the quota as the manpower requirements grow, the various schools of the New York Fire Department's Fire College must be prepared to train at least 1,200 new firemen each year and instruct and indoctrinate many hundreds of their members in the technical requirements and duties of specialized ratings to which they are assigned or aspire.

Promotions to the ranks of the department's 2,100 officers, and advancement of officers in the several grades from lieutenant to deputy chief of department, mean that the Fire College must conduct indoctrination courses each year for an increasing work load of members as they advance to the next higher rank.

To meet the immediate and urgent needs of the probationary firemen's school, Deputy Chief in Charge Otto H. Knockenhauer has been authorized by Fire Commissioner Edward F. Cavanagh, Jr. and Chief of Department Edward Connors to establish a new training unit on Welfare Island. The equipment for this unit is rapidly being assembled in the buildings made available to the department. There will be suitable classrooms and auditorium, with several acres of ground for evolutions and instruction. A garage on the grounds provides space for the unit's pumper and aerial and facilities for instruction in station duties.

Under the new probationary firemen's school setup, there will be four units: A fire college unit at the Fire College, Long Island City; an engine unit at Pier 1, Manhattan; a ladder unit at 68th Street, Manhattan, and a combination unit at Welfare Island, East River.

The plan contemplates probationary firemen classes of 240 trainees divided into four groups and rotating in progressive steps from the classroom indoctrination at the Fire College to the final coordination of the basic training under the more complex conditions of combined unit field operations of the Welfare Island training grounds, where as far as possible, the training will simulate actual fire conditions.

California Standardizes Hose Coupling Threads

The State of California began a program of standardizing all 1½-inch hose coupling threads in July of this year when Governor Goodwin J. Knight signed into law Assembly Bill No. 2755. All 2½-inch hose couplings in California have had National Standard threads since 1932.

The bill makes an appropriation to the State Fire Marshal to procure and make available to fire departments the necessary tools for converting existing threaded fittings to the National Standard fire hose thread.* A five year period is provided for making the conversion. It also authorizes the State Fire Marshal to make such changes as may be necessary to standardize all existing fire protection equipment.

The State Health and Safety Code, Section 13028, makes it a misdemeanor, subject to fine and/or imprisonment, for a person to sell or offer for sale any fire apparatus or equipment having threaded connections unless such threads are National Standard.

* Hose coupling threads are to be finished with a "Higbee Cut." Tools and equipment for making this cut, designed by Battalion Chief Robert Ely, San Diego Fire Department, were reported in FIRE ENGINEERING, July 1957.

Governor Goodwin J. Knight signs hose thread standardization bill in presence of (left to right) Harold McBeth, president, California Firemen's Association; Gene Albrecht, secretary, California Firemen's Association; Elmer Brouillard, president, Northern California Fire Service Section; Harold Bowhay, chief, Fire Services Section, State Disaster Council; John Tomlin, president, California Rural Fire Services Association; Joe R. Yockers, State Fire Marshal; Ted Becker, president, California Fire Services Association

SUPERVISING ENGINEER UNITS

Continued from page 1035

Liaison with Board of Standards and Appeals. From time to time, the staff is called upon by the New York City Board of Standards and Appeals to conduct hazardous field tests on products which are before them for approval. One such test involved a structure, made of a new type of cement block, whose inside had to be superheated by the application of flame for many hours, before it was hit by a stream from a certain size nozzle at a certain pressure. Even without stream application it was not possible to approach the small entrance to the cement building. Obviously, conditions were going to become worse for operating personnel as pressurized steam escaped from the interior. The problem was solved by erecting a large protective shield and positioning a sub-cellar pipe over its top. Correct engine pressures to supply the desired nozzle pressures had previously been determined by experiments.

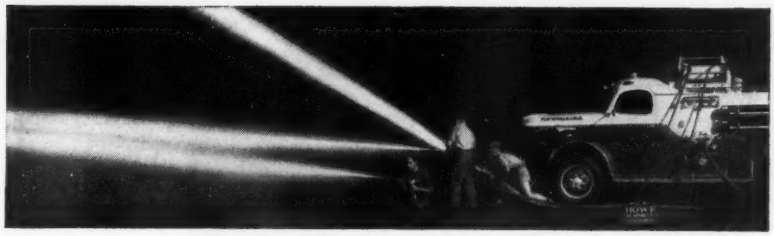
Another test involved a particular type of tank truck up for approval. An isolated area had first to be cleared for the test, operating personnel indoctrinated in the method of attack and a raging gasoline fire extinguished after it had been permitted to burn for a considerable time in order to subject the tank to its heat.

Surveys and Survey Board. The water supplies of many large plants, among them colleges, bulk oil storage installations and public utilities, have been determined by actual flow tests, in the department's preplanning program as well as post-fire investigations. Nearby fire companies are generally used in these tests in order to familiarize them as well as chief officers in the most advantageous positioning of pumpers in large scale operations.

In order to gain the greatest benefit from prudent distribution of the various types of apparatus, specialized equipment and foam supplies, they are indicated on a large scaled map and recommendations made to the officer charged with the final responsibility in this matter.

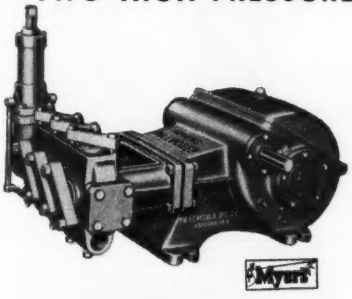
The survey board of this department, which conducts investigations into unusual fires or fires of large proportions, requires certain preliminary information before they actually hold a hearing. The engineer unit prepares complete information for them on such aspects as the available water supply, size of mains, static and residual pressures, location of all apparatus, the positioning of lines and all other unusual circumstances which affected the fire operation.

One of the investigative projects recently completed has been a survey of the entire city, encompassing the Armed Forces (Army, Navy, Coast Guard and Air Force,) large bulk oil storage plants, airports under the Port of New York Authority, public utilities, large private plants (shipyards, chemicals, transportation and towing concerns) as well as other city departments. The survey report includes a listing of the apparatus, equipment (including foam supplies) and manpower available to this depart-



Three Streams *at one time*

TWO HIGH-PRESSURE *and* ONE HIGH-CAPACITY



"Dual Fire Fighter" trucks, originated by Howe Fire Apparatus Co., mount a Myers Giant Bulldozer pump. It delivers 60 gpm. at a pressure of 800 psi. These high-pressure lines are backed up by a high-volume pump to make the right combination for fighting a wide variety of small fires.

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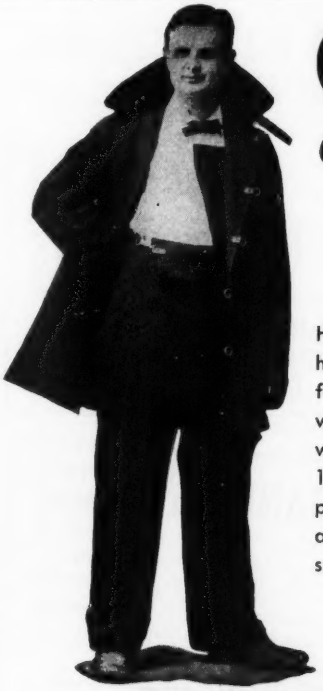

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Here is the suit that firemen all over the world have come to know as the finest, most comfortable and most durable protection ever worn. It's really three coats in one—a tough water-repellent cotton duck outside; — a 100% DuPont Neoprene interlining, completely waterproof—and a warm, comfortable lining. You owe it to your men Chief,—specify and buy GLOBE.

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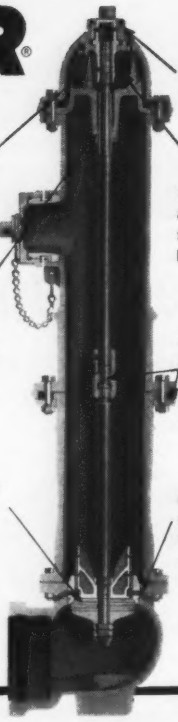
MUELLER®
FIRE HYDRANTS

AWWA IMPROVED TYPE

for perpetual readiness!



Bronze weather cap assures easy operation in any weather.

Dry top design keeps threads and bearing surfaces away from moisture.

Self-oiling reservoir automatically lubricates stem threads when hydrant is operated.

"O" ring seals around stem eliminate maintenance of stuffing boxes and glands.

Safety stem coupling and flange prevent damage to stem and barrel by traffic collision.

Compression-type main valve closes with pressure – assures positive shut-offs.

Double drain valves automatically flushed when valve is opened – a positive drain.

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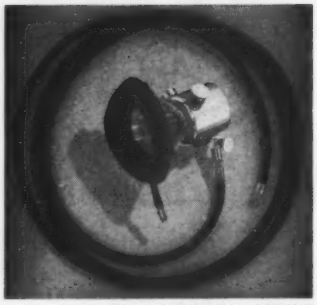

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Complete, independent resuscitation-inhalation treatment for two- or three-patient emergencies. Write for details.

E & J MANUFACTURING COMPANY, 100 E. Graham Pl., Burbank, Calif.

FOL-DA-TANK 600 and 1000 GALLON SIZES

A completely portable, auxiliary water tank of many uses. Sturdily constructed of steel tubing and heavy, waterproof treated duck. Requires no tools or fasteners to set up or take down. Indispensible to rural volunteer units. Reasonably priced.

★ FOLDS TO 10"x30"x8'3"
★ FAST-EMPTYING SPILLWAY
★ HEAVY DUTY CONSTRUCTION

READY FOR USE IN SECONDS

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ment in order to permit it to initiate a mutual assistance and disaster plan for large-scale fire fighting operations. Final decision in this matter is being considered by top officials of the department.

Compilation of Printed Information. Besides the five sets of lectures in the motor and pump operators' school of the fire college, bulletins have been prepared on a wide variety of topics including Civil Defense pumpers, the 1954 Mack pumper, new type foam nozzles and above-ground application of chemical foam. As new ideas, items or operations come to light and are deemed worthy of adoption, similar printed information will be compiled and disseminated for the benefit of the rest of the department.

The members are grateful for any suggestive comments on any phase of the supervising unit. No single department, unit or individual can afford to be considered self-sufficient, particularly in the light of our present day involvement in highly technical and hazardous fire problems, as well as the introduction of new and improved techniques in handling such situations.

Some of our ideas and findings have been shown to various manufacturers and to other fire departments and available information requested of them. It is only by such a mutual exchange of ideas and pooling of knowledge that real progress will be made in the fire service. □□

Acknowledgement: The author wishes to express his appreciation to all who assisted in the compilation of this article; particularly Acting Lieutenant Ray Hellriegel, Fire Department of New York, and Jonathon J. Lerch for their photographic coverage.

JERSEY CITY BLAST

Continued from page 1027

Engines 4/22, 6/18, Ladder 2/10 and Battalion 3 responded.

At 2:40 p.m. Engine 15 responded to a still alarm for grass.

At 3:11 p.m. ADT station 3258 was received. Box 141 was transmitted and Engines 2/16, 4/22; Ladder 1/12 and Battalion 4 responded. A broken sprinkler head caused the alarm.

At 3:51 p.m. Box 143 was pulled and Engines 2/16, 10; Ladder 1/12 and Battalion 4 responded. This proved to be grass.

At 4:44 p.m. Box 116 was received for an alarm at 348 Henderson. Engines 3, 2/16; Ladder 1/12 and Battalion 4 responded. Because the fire was in view of the companies still at the explosion scene, Chief Rifflard ordered Deputy Chief Burke to respond. This proved to be a sofa in a residential building. □□

From a report by Chief Thomas J. Maloney and Deputy Chief Jules A. Rifflard. Special acknowledgement is also extended to the National Board of Fire Underwriters, The Fire Insurance Rating Organization of New Jersey and Chief A. W. Leggatt, Mount Vernon, N. Y., Fire Department.

IAFC CONFERENCE

Continued from page 1031

Administration to re-establish program which provides matching funds for fire service (referred to board of directors for further study)

11. Endorsing the Association's Fire Education Fund previously voted upon (approved)

12. Conveying appreciation of the Association and visiting officials to Fire Chief Howard Dey, the officers and members of the New Orleans Fire Department, to city officials and all others who contributed to the success of the 84th Annual Conference (approved)

Other matters included a further discussion of four amendments to the by-laws; ways and means to improve the educational programs of the conference; the advisability of devoting more consideration to volunteer fire departments; the possibility of providing members with certain information which they may require.

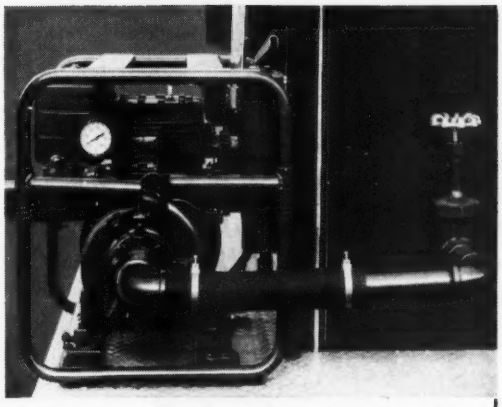
The newly elected officers spoke briefly, after which President Charles re-appointed Jay W. Stevens executive secretary and Chief Clyde Canning chairman of the Exhibit Committee. The City of Los Angeles and the dates of September 15 to 18 were approved for the 1958 conference. Final adjournment came with Chief William Taylor, Burbank, Cal., offering prayer. □□

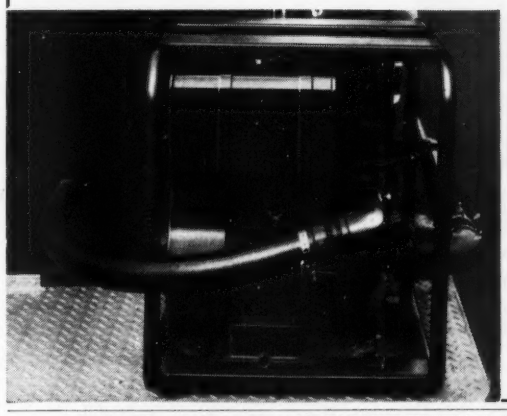
Port Angeles Wins Award

Fire Chief Clay Wolverton of Port Angeles, Wash., makes the acquaintance of "Chief"—Dalmation puppy awarded his department when the Puget Sound community won the 1956 National Fire Safety Contest. Chamber of Commerce President James Robinson (left) and H. L. Petrey, vice president of Central Mutual Insurance Company, which donated the dog, look on. Chief Wolverton, lured to a Chamber of Commerce meeting to hear a talk on "fire insurance," was overwhelmed when it turned out to be praise for his achievements, culminating in the dog award.

HALE Type FZZ
Portable Unit Installed on Running board of Apparatus

Picture at right shows Hale FZZ portable pumping unit (from Suction Side) neatly installed on running board of pumper. Shut-off valve at right leading from Booster tank.





Left . . . view of FZZ from Discharge Side showing Discharge running into Booster line.

Pump can be easily detached to fight fire direct; as standby pump; or to supply larger pumper from source of water inaccessible to the pumper.

The FZZ will supply from draft 2 capable fire streams thru 1½" lines. Performance substantially exceeds NFPA capacity and pressure requirements for portable pumps.

Write for NEW FZZ folders. Ask for Demonstration.

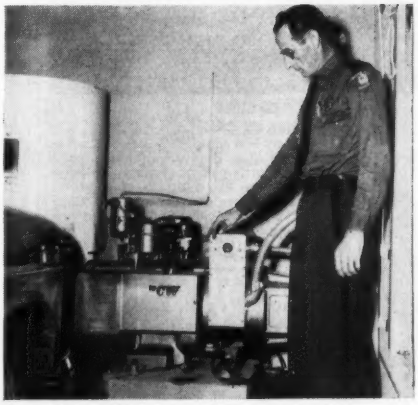
HALE FIRE PUMP CO.
Conshohocken, Pa.
Fire Pumps in all Standard Capacities

Onan ELECTRIC PLANTS
ELECTRIC PLANT NEWS
Onan ELECTRIC PLANTS

Police and fire departments are assured power

Onan 10KW Emergency Electric Plant protects community building

Among the many modern features of the new community building in Indian Hill, Ohio, is *insurance against power interruptions.* When disasters knock out highline power, the Onan Electric Plant starts automatically and supplies all the electricity needed for police and fire departments. Provides current for lights, radio and other electrical equipment. Allows vital municipal services to operate normally, *protecting the community.*



The Onan 10KW, Series "CW" standby plant at Indian Hill is powered by a 4-cycle, 2-cylinder, air-cooled engine. It is equipped with Vacu-Flo cooling which allows installation in a closed room or small compartment.

Check Onan quality and low prices before you buy an electric plant for any purpose.

A.C. Models: 500 to 75,000 watts. Also D.C. and Battery Charging units.

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It GROPES! and GRABS! and CUTS!

IN SMOKE AND DARKNESS!

No Wonder the

PORTER HKP® FIREMAN'S CUTTER

with SEARCH HOOK —is 1st Choice of Most Fire Departments!

Yes — the groping hook of the famous **PORTER FIREMAN'S CUTTER** guides smoke-hidden "live" wires into the center cut cutting jaws, when time can mean lives and property saved. Other great features include hot-molded, special semi-hard rubber (Cohardite) insulation for handles, giving tough resistance to oxidation and chemicals, and high dielectric strength. Each tool factory tested to 20,000 volts. Two sizes — 5/16" and 3/8" wire capacities.

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"FORCIBLE ENTRY" HEAVY DUTY CUTTERS

Here is a rugged hard metal cutter that fire departments rely upon for cutting their way through tough barriers, like padlocks, steel grilles and other heavy metals. Hard tempered, center cut, round-cutting-edge jaws make these "forcible entries" easy. Cutting capacities up to ¾".

LINKMASTER —Tire Chain Repair Tool

Cuts time of chain repairs to a minimum. Opens and closes links in seconds, with powerful alloy steel, drop-forged, heat-treated jaws. No lugging chains to workbench — just spread on floor, and work standing up. Handles links up to 13/32" diam.

HAVE YOU "DISCOVERED" THE PORTER POLE PRUNER — for EMERGENCY CUTTING OF WIRES AND TREE BRANCHES.

When you write for literature on the PORTER FIREMAN'S CUTTER and other tools shown above, ask us to send data on the PORTER RJ3 — 16 FOOT POLE PRUNER, which is becoming the firefighter's preferred tool for hard-to-reach, emergency wire and tree limb cutting.

Ask your Distributor or write:

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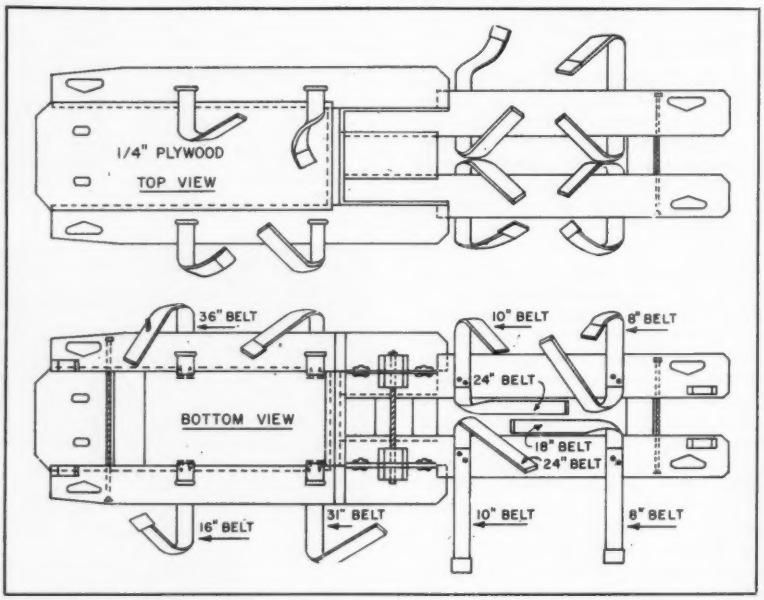
Folding Plywood Back Boards for Transporting Patients



Captain Claude N. Shoop, Jr., of the Annandale, Va., Rescue Squad reports that the folding back boards which were designed and made by the rescue squad members, have proven very effective in their work. The design has been improved upon several times until the squad finally determined what was best.

He reports that they take up little space in an ambulance when folded and are very simple to open and lock for use. The plywood boards are very effective in serious injury cases and the patient may be immobilized by web belts.

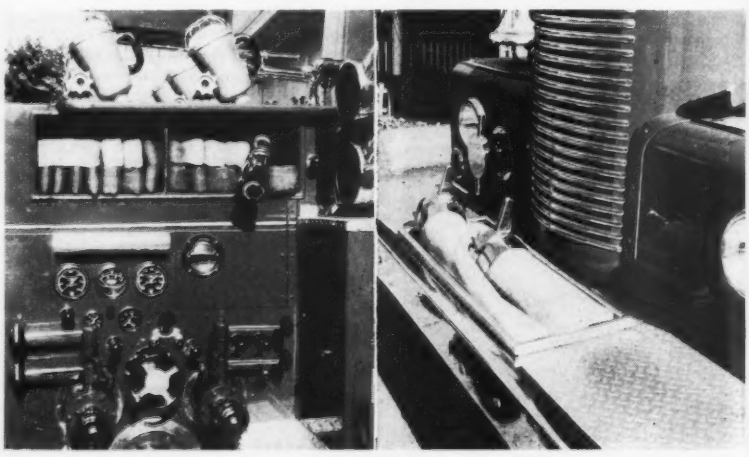
Hose Compartment Ideas for Increased Storage

A new pumper recently delivered to the Mt. Rainier, Md., Fire Department is equipped with two unusual hose storage compartments.

Photo 1 shows the method of loading pre-connected 1½-inch hose above the pump. The compartments, which run the entire width of the pumper, are loaded in such a manner that a 1½-inch line is available on each side of the pump.

Photo 2 illustrates the soft suction storage well between the pumper radiator grill and bumper.

—U. of Maryland Fire Service Bulletin



The "Original" McIntire

INVINCIBLE NOZZLE

Fig. 3

From 300 to 10,000 GPM

Locks in Position

Comes as a complete unit ready to thread to standpipe. Universal in action. Locks in position — can be used unattended. Used on either trucks or as fixed protection in hazardous locations. Write for further information.

F. N. McINTIRE BRASS WORKS, INC.

CAMBRIDGE 39, MASS.

DOES YOUR FIRE TRUCK TANK SHOW RUST?

ARE YOUR FIRE PUMP GATES AND VALVES HARD TO OPEN?

TANK SAVER

WILL SOLVE YOUR FIRE TRUCK MAINTENANCE PROBLEMS

- ★ Positively prevents rust in pump and booster tank.
- ★ Lubricates valves and gates—prevents sticking.
- ★ Will not affect wet water or foam, will not damage fire hose or fabrics.
- ★ Just pour in booster tank and circulate.
- ★ Tested and approved by hundreds of fire departments.

One-half Gallon will treat 500-gal. tank, pump, gates
Single gallons $4.00 Case of four gallons $15.00
F.O.B. Sioux Falls, S. Dak.

Order direct or from your fire equipment dealer.
Fire Equip. Dealers—territories open for distribution

DAKOTA CHEMICAL COMPANY

West 12th St., Dept G., Sioux Falls, S. D.

Substitute Metal Polish

When regular metal polish is not at hand a stick of soft-grade blackboard chalk will prove to be a good substitute. Rub a little of the chalk onto a dry or damp cloth and apply to the surface of the metal. Chalk dust is sufficiently abrasive to remove dirt and grease and at the same time does so without scratching. A good gloss finish will result.

—Popular Mechanics

Fire Apparatus on Stilts

Assistant Chief John J. Vondriska, Newburgh Heights, Ohio, and Joseph Boersig, retired Cleveland fireman, have designed an elevated fire apparatus to overcome traffic problems.

The elevated, four-wheel drive truck would straddle and tower over automobiles and could get through bumper to bumper traffic on any street.

According to Chief Vondriska, the driver of the proposed apparatus would have full view of the streets and the truck would be an ideal base from which to fight fires in two and three-story structures. Both men believe the vehicle is the answer to the problem of getting to fires through standstill traffic.

The Old Timer Says—

When a roof ventilator hood is removed during ventilation at a fire it is good practice to turn the vent up-side-down on the roof and place it next to the air shaft column.

This serves as a visible warning to other men operating on the roof that an opening exists. Of course, as soon as possible a barricade should be erected around the roof opening or the ventilator replaced. □□

Nursing Home Regulations

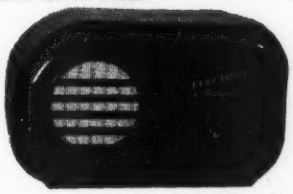
The State of Connecticut has recently placed in effect regulations which stringently govern the conversion of combustible buildings to nursing homes. The administrative regulations were issued by State Police Commissioner John C. Kelly and amend the Connecticut Fire Safety Code.

The amendments prohibit the conversion of any combustible building to a hospital; the conversion of any combustible building of more than one story in height to a convalescent home or home for the aged. They provide also that a combustible building of no more than one story in height may be converted to a boarding home for the aged or convalescent home provided such building is completely protected by a system of automatic sprinklers installed and maintained in accordance with proper and accepted procedures.

The new regulations further provide that all existing convalescent homes, hospitals and homes for the aged of combustible construction shall be completely protected by automatic sprinkler systems on or before January 1, 1959.

PLECTRON Fyrcall

CRYSTAL CONTROLLED



TONE ACTIVATED

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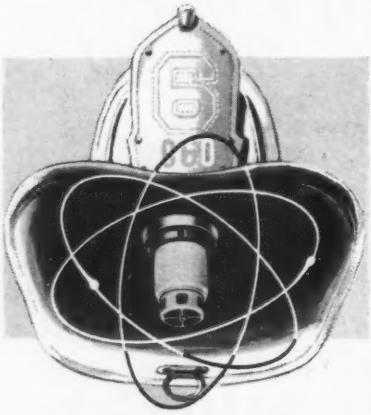

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New Station Preserves Antiques

The Reading, Mass., Fire Department has under construction a new fire station which replaces the wooden fire house built in 1874. The old station originally housed "Hancock 2," a hand tub pumper and in later years the department's horse-drawn hose wagon. In 1919, the use of horses was discontinued and motor apparatus placed in service. At the time of replacement the old station housed two modern pumpers.

Picturesque old Reading, Mass., fire station now being replaced by modern structure. The historic fire bell will be preserved in the new station—*Photo by Carter*

A unique feature of the new fire station will be a flagstone installed in the outside wall. Through the cooperation of Chief Fire Officer Francis Mees, Bershire and Reading Fire Brigade, Reading, England, a stone taken from the floor of quarters occupied from 1876 through 1888 by the Reading, England, Volunteer Fire Brigade was shipped to this country for inclusion in the new house.

The fire bell of the old station will be preserved, complete with its striking mechanism, in a new bell tower to be built on the new station. The bell was cast in Sheffield, England, in 1887.

Chief Hugh L. Eames

Monitor Radio Sets to Call Westport Firemen

Monitor radio sets, designed to speed communications during general alarm fires and emergencies, have been installed in the homes of the 36 paid members of the Westport, Conn., Fire Department.

Use of the radios, Chief Harold A. Shippey said, will eliminate the necessity of telephoning off-duty fire fighters when their services are needed to fight a general alarm blaze.

The chief said the new sets will "pick up" all two-way radio messages to and from central headquarters. Plans call for time signals to be sounded twice daily to let the off-duty firemen determine whether their monitors are functioning properly. The monitors cost the Town of Westport $3,966.

Tom Magner

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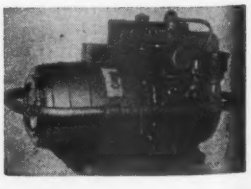

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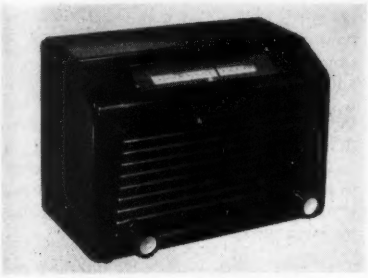

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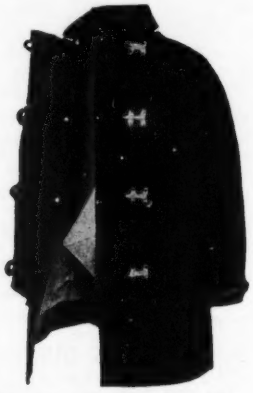

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Department Awards Scholarship

The William A. Magee Scholarship, presented to the Briarcliff, N. Y., Fire Department by Briarcliff College to award to a daughter of an active volunteer fireman of Westchester County was recently presented to Letitia Ann Kohnken, a graduate of Somers High School. Shown at the presentation ceremony are left to right: Ex-Chief William A. Magee, president of the Westchester County Volunteer Firemen's Association, in whose honor the scholarship was named; Briarcliff Chief William Bowers; Miss Kohnken; Chief John H. Kohnken, Somers Fire Department and father of the recipient; and Mrs. Ordway Tead, president of Briarcliff College.

Proposed FCC Rule

The Federal Communications Commission has acted favorably on a petition of the American Municipal Association to create a Local Government Radio Service. The petition, filed by the Association on January 3, 1957, would provide for one radio service to serve cities and other local governments for public works, sanitation, police, fire, water system, and all other activities.

Under present FCC regulations each municipal service must operate on frequencies assigned to the service. The new proposed rule (Docket 11990), which will become effective in late 1957, will provide a service wherein all essential government communications may operate on a common frequency. Present existing frequencies are not affected by the new rule.

Correction

The cover story in the August issue: "Simultaneous Fires Complicate Harlem Holocaust" erroneously states that the first alarm for this fire was received at 12:45 p.m. and indicates that 15 minutes elapsed before the second alarm was ordered.

The correct time of receipt of the original alarm should have stated 12:56 p.m. Deputy Chief Harry G. Kihlgren of the Fifth Division, who "had the fire" at its start, shot the second alarm in within four minutes after the first alarm was received. Furthermore, as the story states, he banged in the third alarm one minute later!

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For details on this timely Acme development, write for Bulletin No. 576 and No. 576-A (Prescription Form).

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the round table

discussion of current fire department and fire management problems

Ladders on Pumpers

THIS IS THE FINAL INSTALLMENT of the Round Table on placement of ladders on pumpers.

The generous response from our readers made it necessary to carry the discussion over to this issue. The edi- which is described in a box on a sub- the subject, or on next month's subject tors will welcome any comments on sequent page. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

Ladders carried on pumpers can be utilized to advantage in close spaces for several purposes. Interior laddering in certain types of buildings can be accomplished with the roof ladder and the extension ladder. If necessary, these ladders can be used to support tarpaulins for forming drafting basins at hydrants. They can be used to bridge fenced areas and can be substituted for "U" poles when it is practical to extend hose lines over roadways, etc.

F. E. Saefke, Chief, Fargo, N. D.: We carry metal side ladders on our pumpers. These include a folding attic ladder, a 14-foot roof ladder and a 16-foot extension ladder.

We have found that in some cases when a pumper responds to a small fire, these small ladders can be used very effectively.

Zephrin F. Drouin, Chief, Lewiston, Maine: All our pumpers are triple combination equipped with a 10-foot folding ladder, 12 or 14-foot roof ladders with roof hooks and a 24-foot extension ladder. At the present time these are of wood. Metal ladders would require less maintenance than wood. The latter have to be checked for damage or splinters annually and require sandpapering and varnishing. The only advantage of the wood ladder would be in working around electrical wires.

We also have two aerial trucks that respond to building fires. One has a 75-foot wood ladder and the other a 65-foot metal ladder.

Francis J. McDonald, Chief, Fall River, Mass.: Our pumpers are equipped with metal side ladders. Each one carries a 24 or 30-foot extension ladder, a 12 or 14-foot roof ladder and a 10-foot cockloft ladder.

As our department is equipped with 12 pumpers and five ladders, the pumpers are more widely distributed and on many occasions will arrive at the scene of a fire well in advance of a ladder truck. Under such conditions, a ladder would be available for rescue work or fire fighting if necessary. Such an arrangement could save the day should a truck company be delayed by a breakdown, accident or traffic congestion. Pumpers are dispatched to lockouts and similar situations, making it unnecessary to tie up ladder companies for such minor services.

V. L. Crusinberry, Chief, Sioux Falls, S. D.: All apparatus in the Sioux Falls Fire Department is equipped with a 24-foot side ladder and a 12-foot roof ladder. All pumpers with the exception of one carry aluminum ladders which we consider superior to wood. These ladders serve a purpose where an occasional alarm is answered by one pumper only, and again in alleys in our downtown areas. They serve as additional security when ladders are needed.

J. W. Lobue, Chief, Houston, Tex.: Some of our pumpers carry 20-foot extension ladders while others have the 24-foot extension. All carry a 12-foot roof ladder. These are of wood.

Pumpers are sent on still alarms. These ladders can be used for quick access to roofs of one-story residences. We have a great number of homes that are covered with wood shingles.

O. E. Boggess, Chief, Charleston, W. Va.: All our pumpers and hose trucks carry 12-foot roof and 24-foot extension wood and metal ladders. We feel so strongly about side ladders that we take the trucks out of service in the event the ladders are damaged beyond usage.

Paul A. Neumann, Chief, Appleton, Wis.: We carry metal side ladders on all our pumpers. These are 24-foot extension and 14-foot roof ladders.

A pumper answers all calls in one-story home districts as we have only one aerial ladder.

THIS MONTH'S QUESTIONS

Do you carry side ladders on your pumpers?

If you do, what type (wood or metal) and what sizes?

What advantages do you find in so equipping your pumpers?

If you do not carry any ladders on pumpers, what are your reasons for not doing so?

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NEXT MONTH'S QUESTIONS

Do you connect to outside siamese of sprinkler systems or standpipes regardless of size of fire? If so, is this the first line stretched or a later line?

What size hose is used for outside connection (2½-inch, 3-inch, etc.)?

On inside fires do you remove standpipe hose line and substitute your own? If so, in what form is this hose carried (accordion fold, donut, etc.)?

Raymond J. Kropp, Chief, North Tonawanda, N. Y.: We carry ladders on all our pumpers. Three of our pumpers carry a 24-foot extension, a 14-foot roof and an 8-foot folding ladder. Two pumpers in the outlying districts carry a 35-foot, 3-section aluminum ladder; a 14-foot roof and an 8-foot folding ladder.

William J. Cook, Chief, Shreveport, La.: We carry 12-foot roof ladders and 20 and 24-foot extension ladders on our pumpers. These ladder lengths are very handy especially in our residential areas, for we have many one-story residences.

Paul R. Flynn, Chief, Duluth, Minn.: We carry both wood and metal side ladders on our pumpers. These are 28-foot ladders.

Pumpers go out alone on calls for smoke odors. In some districts we do not have a ladder company responding. The advantage of having a ladder on a pumper is to save the time it would take to call for a ladder company.

Karl Evans, Chief, Reno, Nev.: We have only one pumper. All the rest of our trucks are triple combinations.

Harry L. Ridout, Chief, Muskegon Heights, Mich.: We carry both metal and wood side ladders on our pumpers. These include a 24-foot extension and a 12-foot roof ladder. This is advantageous, I feel, since our pumpers do not run with ladder companies; hence the need for ladders of suitable lengths to be carried on them.

Walter R. Messer, Chief, Keene, N. H.: We carry 14-foot roof and 24-foot extension ladders on each pumper. These are of wood.

We send out one pumper alone to many of our calls, and we find that ladders are a necessity, particularly for a roof or chimney fire.

Maurice K. Clark, Chief Engineer, Wilmington, Dela.: We carry a 24-foot junior extension and a 12-foot hooked roof ladder on our pumpers. These are of wood.

We have had instances where the crew of the first due engine company arrived to find occupants sitting on second floor

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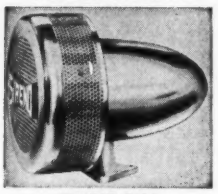

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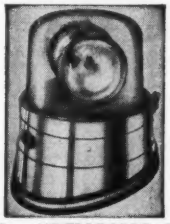

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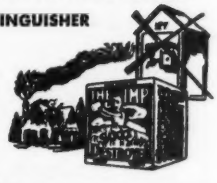

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1952 F700 Ford w/1956 F800 engine, 500 gpm Champion front mount heated pump, 600 gal. tank, 2 heated reels w/300' 1" booster hose & nozzles, 30' 3 pc ext aluminum ladder, 12' roof ladder, 3 large rear compartments. PRICE $6000.00

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window sills. They were able to remove the victims with the 24-foot ladder.

These ladders are also very useful on calls where people have been locked out of their homes or for children locked in rooms. This necessitates the use of only one piece of equipment for this type of call.

Bernard J. Padgett, Chief, Alexandria, Va.: We carry 12-foot roof and 24-foot extension ladders on our apparatus. These are of wood.

Pumpers are the first pieces of apparatus due at a fire. Ladders from them are available and may be used for rescue.

Pumpers in some cases (court areas, for instance) can get closer to the fire than can aerial trucks. In these instances, ladders from pumpers can be used if of sufficient size.

William G. Wandras, Chief, Kearney, N. J.: We carry 10-foot wood ladders and 24-foot wood extension ladders.

As pumpers are the first pieces of apparatus to arrive at a fire, we find many uses for the small ladders carried.

Charles Bryan, Chief, East Liverpool, Ohio: All pumpers in this department are equipped with 14-foot and 24-foot folding ladders.

We find these ladders are very effective for getting into second floors and roofs. □□

Death From TV Antenna

Alfred Hook, longtime resident of the Walla Walla, Wash., area, was instantly killed by electrocution and his helper was seriously burned early last spring, while attempting to erect a 30-foot mast, 10-element television antenna on a home located about five miles west of the city. According to Pacific Power and Light Company spokesmen and Walla Walla electrical officials, the victim was using a No. 14 wire for a ground connection. It is thought that his TV line was apparently connected to this ground wire.

The power company spokesmen stated that it was their belief that the television antenna had touched the first phase of a 12,000-volt feeder line and had bounced through the other two phases and on to neutral. An employee of the power company, looking for a failure in the service near the disaster area, noticed the trouble and the building fire shortly after the antenna fell. The clothes of the victim were set afire.

Walla Walla County Coroner Leonard DeWitt stated that the victim suffered severe burns on the left arm and a deep hole was burned into his left shoulder. The condition of the soil at the scene was damp and the victim had been wearing neolite or rubber soles.

Scorch marks on residence from fire caused by TV antenna coming in contact with 12,000-volt line—*Walla Walla F. D. photo*

August Fire Losses

Estimated fire losses in the United States during August amounted to $78,364,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $78,364,000 loss represents an increase of 4.6 per cent over losses of $74,930,000 reported for August 1956, and an increase of 0.7 per cent over losses of $77,814,000 for July 1957.

Losses for the first eight months of 1957 now total $706,333,000, an increase of 6.8 per cent over the first eight months of 1956, when they amounted to $661,085,000.

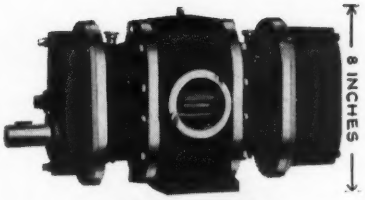
These estimated losses include an allowance for uninsured and unreported losses.

Youths Recruited to Set Fires

City patrolman and volunteer fireman, Tommy Harrell, 23, Mansfield, Tex., was charged in Peace Justice Whit Boyd's court with being an accomplice in attempted arson, after he admitted to Deputy Sheriff E. N. Buie that he recruited as many as a dozen youths in an attempt to wake up those "sleepyheaded" firemen.

Harrell convinced the youths, ranging in age from 16 to 20 years, that "the law's on your side" in the setting of the numerous fires. Most of the fires were minor, but at least one of them did an estimated $3,000 damage. Two of the youths told how Harrell went to them three times in one night and begged them to set fire to a grocery store and feed store in Mansfield. Harrell said, "You can get some gas from the service station pumps, put it in a coke bottle and that would really set it good."

As a night patrolman, Harrell also served as a volunteer fireman who would roar off to the fire on one truck, and be found by the other volunteers bravely fighting the flames on their arrival. Harrell said he talked the youths into setting the fires "because I like the excitement of putting out the fires." He added, "But I'm not a firebug. If I was, I would have set the fires myself." —*Jim Noah*



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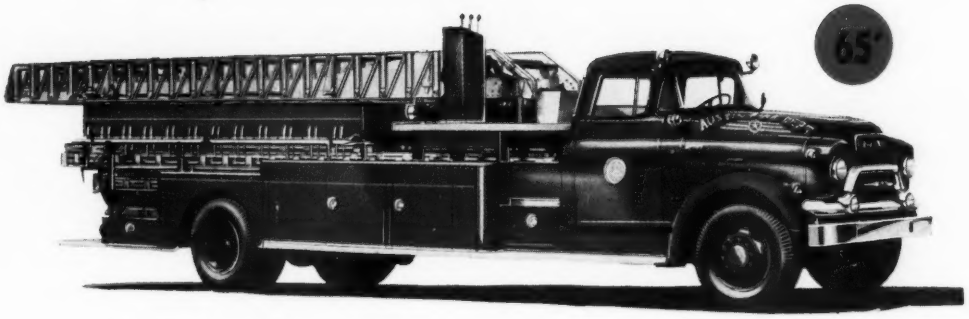

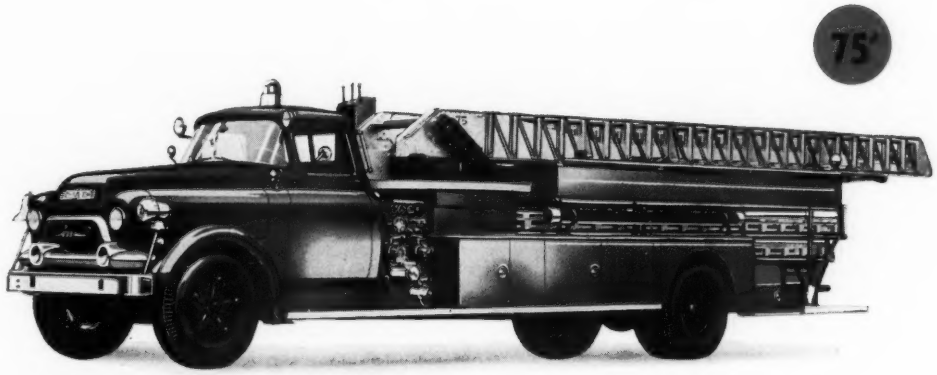

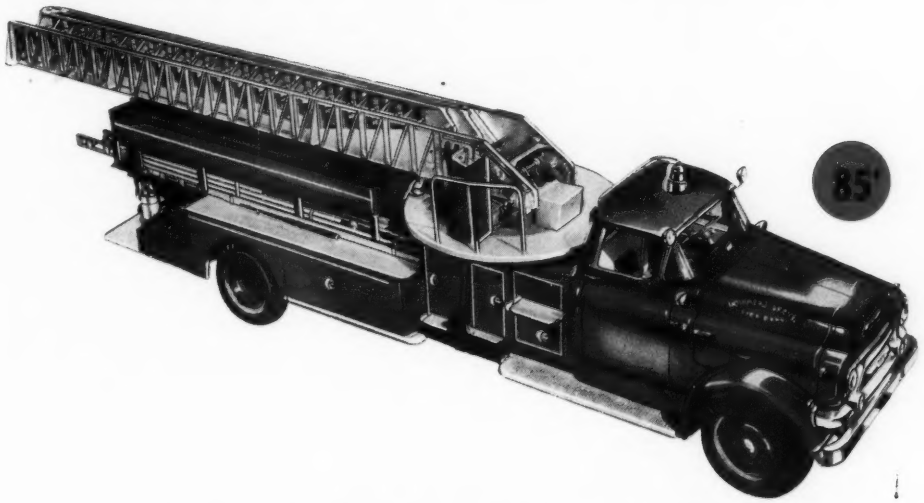

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In addition to the regular line of Pirsch custom built aerial ladder trucks Pirsch produces Commercial chassis aerials in 65', 75' and 85' sizes the first of which was produced in 1939.

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